OHIO STATE UNIVERSITY
JUL 5 1927
LIBRARY

FIRE ENGINEERING

A Consolidation of
FIRE AND WATER ENGINEERING *and* THE FIRE ENGINEER

JUNE 29, 1927

EUREKA
FIRE HOSE

Fire Department
efficiency
depends upon
hose performance

Eureka Fire Hose Manufacturing Company
50 CHURCH STREET, NEW YORK CITY
ATLANTA BOSTON CHICAGO COLUMBUS DALLAS DENVER DES MOINES DETROIT
KANSAS CITY LOS ANGELES MINNEAPOLIS NEW YORK PHILADELPHIA PORTLAND SYRACUSE

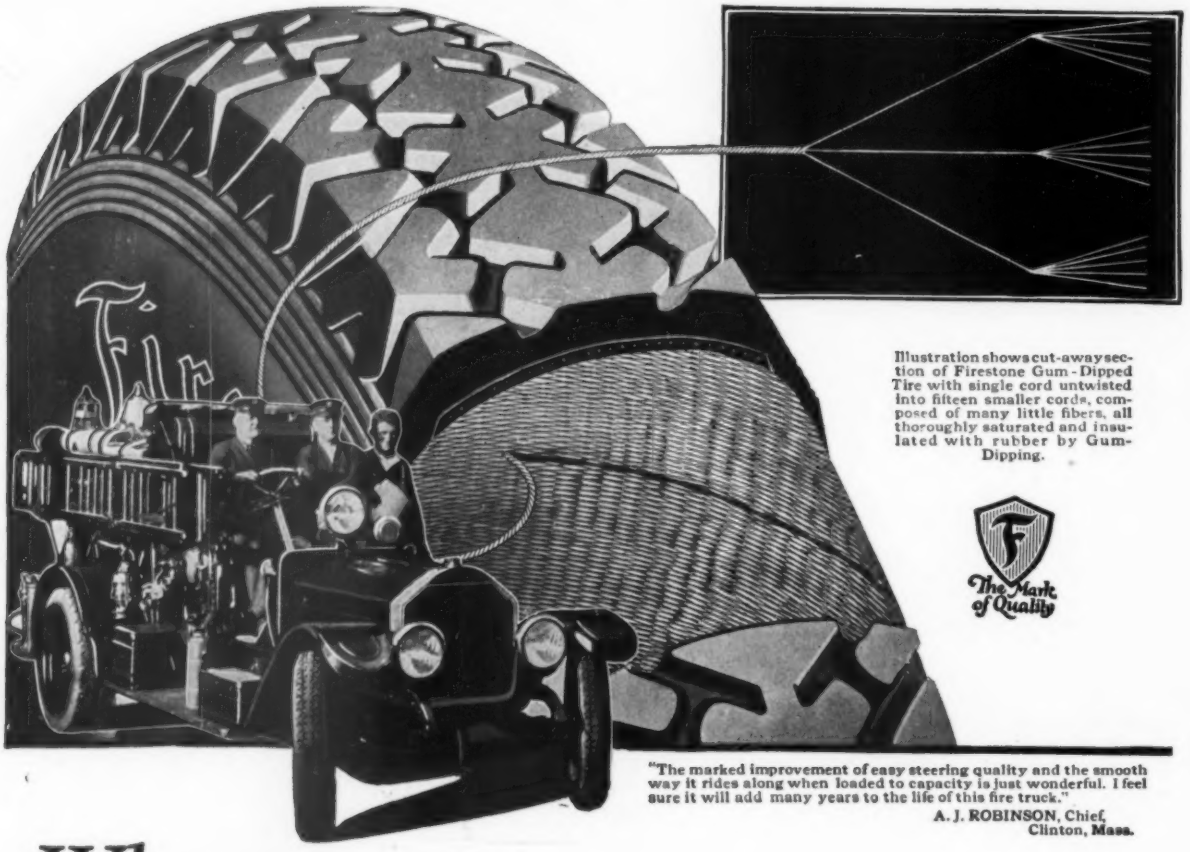


Illustration shows cut-away section of Firestone Gum-Dipped Tire with single cord untwisted into fifteen smaller cords, composed of many little fibers, all thoroughly saturated and insulated with rubber by Gum-Dipping.

The Mark of Quality

"The marked improvement of easy steering quality and the smooth way it rides along when loaded to capacity is just wonderful. I feel sure it will add many years to the life of this fire truck."

A. J. ROBINSON, Chief,
Clinton, Mass.

Why Firestone

Dips the Cords of the Carcass in a Rubber Solution

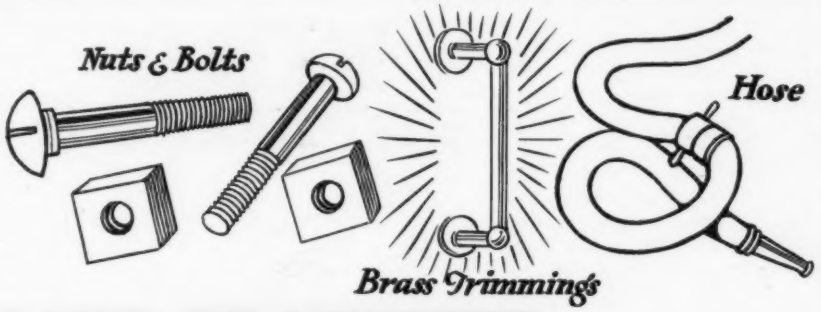
In the old Fabric Tire, internal friction was excessive and mileage low, due to the square-woven construction of the fabric being impossible to insulate with rubber.

Then came the Cord Tire, with cords in each ply laid parallel—no interwoven cross-threads—permitting much greater insulation of the cords, one from another. This materially reduced friction and more than doubled tire mileage. But the small cords were not insulated with rubber and destructive friction within the cord was not overcome. After much research Firestone chemists found a method of insulating every fiber of every cord with rubber and called it "Gum-Dipping." By this process the cords of the carcass are dipped in a rubber solution which penetrates to the innermost fibers, protecting Firestone Tires from the fatigue of high speed driving.

Call on the Firestone Dealer today. Let him save you money and serve you better.

MOST MILES PER DOLLAR

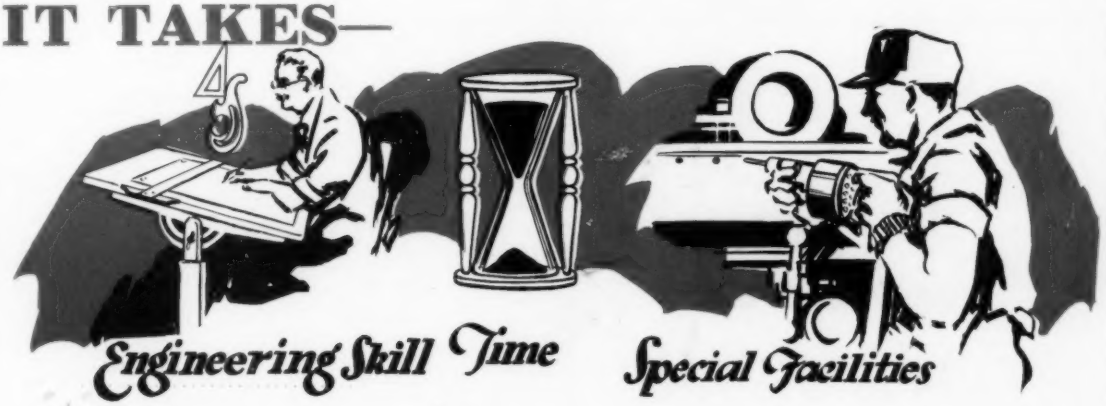
AMERICANS SHOULD PRODUCE THEIR OWN RUBBER . . Harvey S. Firestone

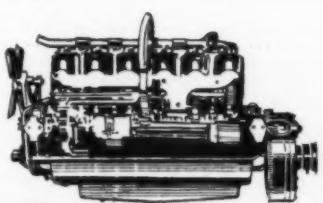


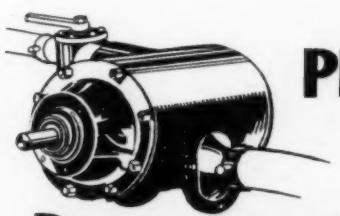
DON'T BE DECEIVED

The above never made efficient fire apparatus!

IT TAKES—







PLUS

Efficient Power Plant — *Proven Pumping Units* — *Seagrave Experience*

It takes more than mere parts to make fire apparatus that will be efficient through a long period of service.

The dependability and efficiency of Seagrave apparatus is based upon 40 years of experience, in which engineering skill, time and special facilities have enabled us to produce apparatus and equipment with the utmost fire-fighting efficiency. The mark of Seagrave is the mark of service.

The SEAGRAVE Corporation

COLUMBUS, OHIO

BRANCH OFFICES AT:

Boston, Mass.
New Haven, Conn.
Birmingham, Ala.
Philadelphia, Pa.
Chicago, Ill.
Dallas, Tex.
Los Angeles, Cal.
Kansas City, Mo.
Pittsburgh, Pa.
Seattle, Wash.
San Francisco, Cal.

The Journal of the Fire Protection Profession Since 1877

MEMBER
Audit Bureau of Circulations
Assoc. Business Papers, Inc.

FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING and THE FIRE ENGINEER

Published Every Other Wednesday

SUBSCRIPTION PRICE
U. S. $3 a year; Canada $3.50
Foreign $4; Single copies, 25c.

Issued at Lyon Block, Albany, N. Y.,
by CASE-SHEPPERD-MANN PUBLISHING CORP.
Also publishers of "Water Works Engineering," Technical Books, etc.

Executive, Editorial, Advertising and Subscription Offices,
225 West 34th Street, New York City
All communications, including Editorial, Advertising and Subscription, can be directed to either of the above addresses.

KARL M. MANN
President and Advertising Director

FRED SHEPPERD
Managing Editor

I. HERBERT CASE
Vice-Pres. and General Manager

H. S. ESSEX, Advertising Manager; ROBERT H. LOCKWOOD, Editor; N. N. WOLPERT, Asst. Editor

HAROLD T. MURRAY, Western Manager, 30 N. Michigan Ave., Chicago, Ill. Telephone: Franklin 0138.

EDITORIAL ADVISORY BOARD

JOHN KENLON
Chief, New York Fire Dept., Founder of New York Fire College

JOHN C. MORAN
Chief, Fire Department Hartford, Conn.

GEO. J. KUSS
Former Deputy Chief N. Y. F. D.; Lecturer on Fire Fighting, Delehanty Institute, N. Y.

A. A. BELL
Chief of Fire Brigades and Engineer "America Fore" Group of Fire Insurance Cos.

This is the Life!

WITH President Coolidge and many thousands of more ordinary citizens using these fine summer days for fishing, we are all apt to be overcome by "the warm weather blues" and forget the work that lies ahead of us.

¶ With the big Fire Convention at Portland next month looming before us, it is time for everyone interested in the fire field, chief and manufacturer alike, to get his plans under way for attending the Convention and deriving the greatest possible good from it.

¶ Conventions take us away from our holiday fishing as well as from our daily work, but they are important in getting together at one time those who have something worthwhile to contribute toward the advancement of the fire-fighting profession, and those who go to learn and to pick up ideas and information of future value.

¶ FIRE ENGINEERING is glad of the opportunity that is given it to cooperate with the various officials and the manufacturers who are working so hard to make the Convention a success. Let's all get behind them, from the very start!

The Publishers

CONTENTS

JUNE 29, 1927

VOL. LXXX No. 13

How Hartford Handles Fire Traffic, by John C. Moran (Portrait) 635
Drastic Laws and the Installation of Equipment Keeps Lanes Clear For Apparatus.

Handling Distant Fires With Relay Lines, by Fred Shepperd 637
Advantages of Different Layouts in Bringing Water to the Fire When the Supply is Distant.

Use Full Capacity of Your Pumpers (Illustrated) 639
One Fire Which Emphasizes the Results of Only Partly Utilizing Facilities Available.

With the Editor 645
Comments on Current Events and Live Topics by Our Editorial Staff.

Questions and Answers 647
Replies to Questions on All Manner of Subjects of Fire Fighting and Fire Protection.

Recent Important Fires Specially Reported (Illustrated) 649
Warehouse Fire in Montreal, Can.—Burnings of the Week.

Of Interest to Volunteer Fire Departments (Illustrated) 653
Matters of Importance to Volunteer Firemen.

Industrial Plant Protection (Illustrated) 654
Some Items of Interest to Industrial Plant Brigades.

Recent Patents (Illustrated) 656
Description of Patented Inventions of Interest to Fire Department Officials.

Fire Department Activities 663
Newsy Notes from All Over the Country with Matters Firemanic.

Fire Department Improvements 664
Record of Business Activities in the Fire Protection Field.

False Alarms 668
The Humorous Side of the Fire Protection Profession.

Contents of this issue copyrighted, 1927, by Case-Shepperd-Mann Publishing Corp., 225 W. 34th St., New York City
Entered as second class matter at the Post Office, Albany, N. Y., January 29, 1926, under the Act of March 3, 1879.

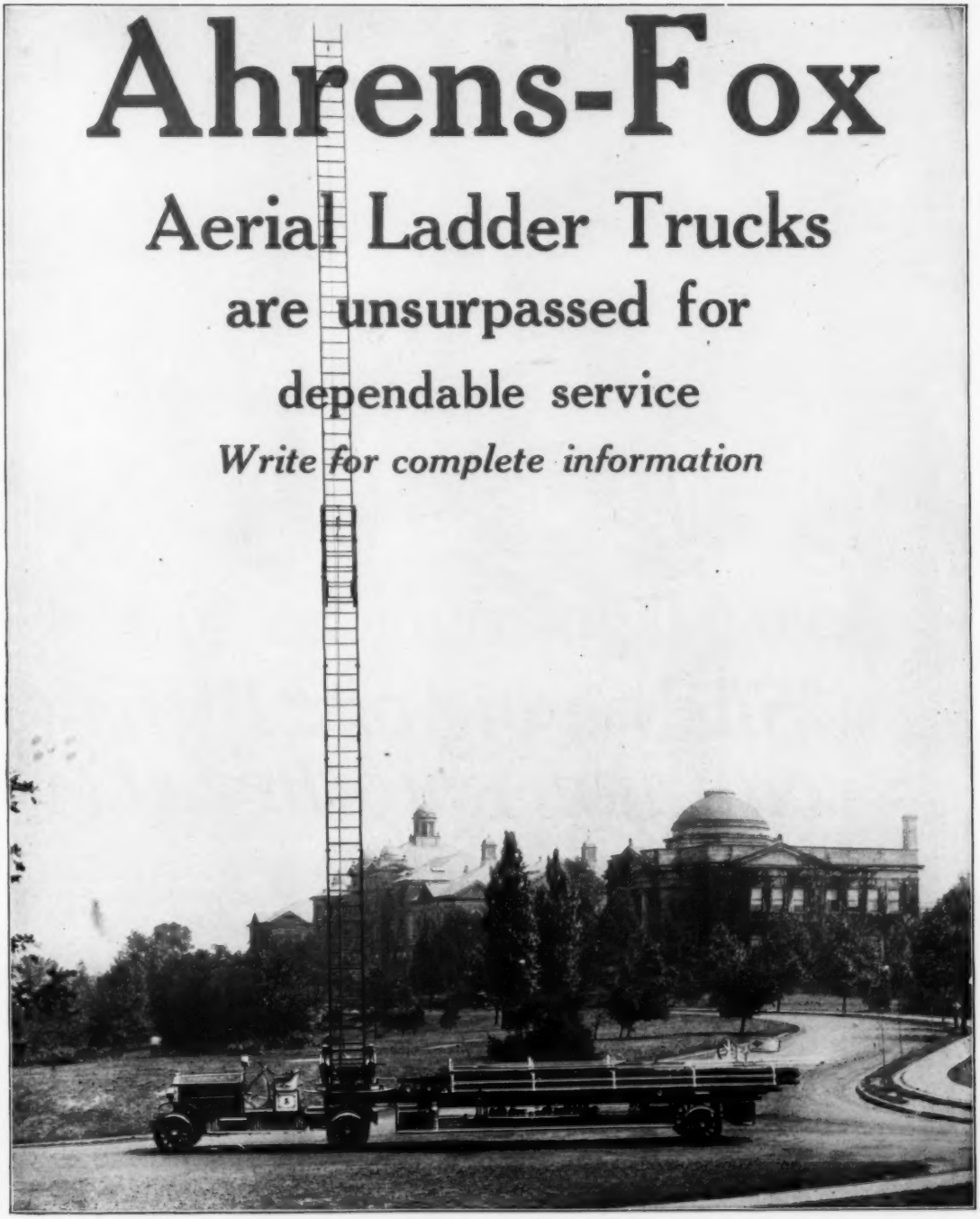
Ahrens-Fox

Aerial Ladder Trucks

are unsurpassed for

dependable service

Write for complete information



The Ahrens-Fox Fire Engine Co.

"Builders of Quality Fire Engines"

Cincinnati, Ohio

Eastern Representative
J. A. PRESCOTT
Fisk Bldg., New York

New England Representatives
CARLOW AUTO CO.,
Taunton, Mass.

Chicago Representative
HENRY R. EARLY
Hotel Woodmere,
4641 Woodlawn Ave.

California Representatives, PACIFIC FIRE EXTINGUISHER CO., San Francisco, Cal.
Canadian Representatives, THE BICKLE FIRE ENGINE CO., Woodstock, Ontario
Pacific Northwest Representative, A. G. LONG CO., Portland, Ore.

"She's a big one, Bill, can you smother it?"

Bill knows the answer to that one, because Bill "knows his hydrants." They're Darlings. And Darlings can always be depended on to deliver *full-pressure* by reason of their over-size barrel and extra large valve opening.

That's not theory, but fact. If, for instance, 6" pipe is used, the inside area of a 5" Darling Hydrant is twice the inside area of the pipe. The area of the Barrel being about three times as great as the area of the Valve opening, there is no perceptible loss in the pressure caused by friction in delivering water to the nozzles.

These are factors no fire chief should overlook when you consider the capacities of the big pumpers now in use.

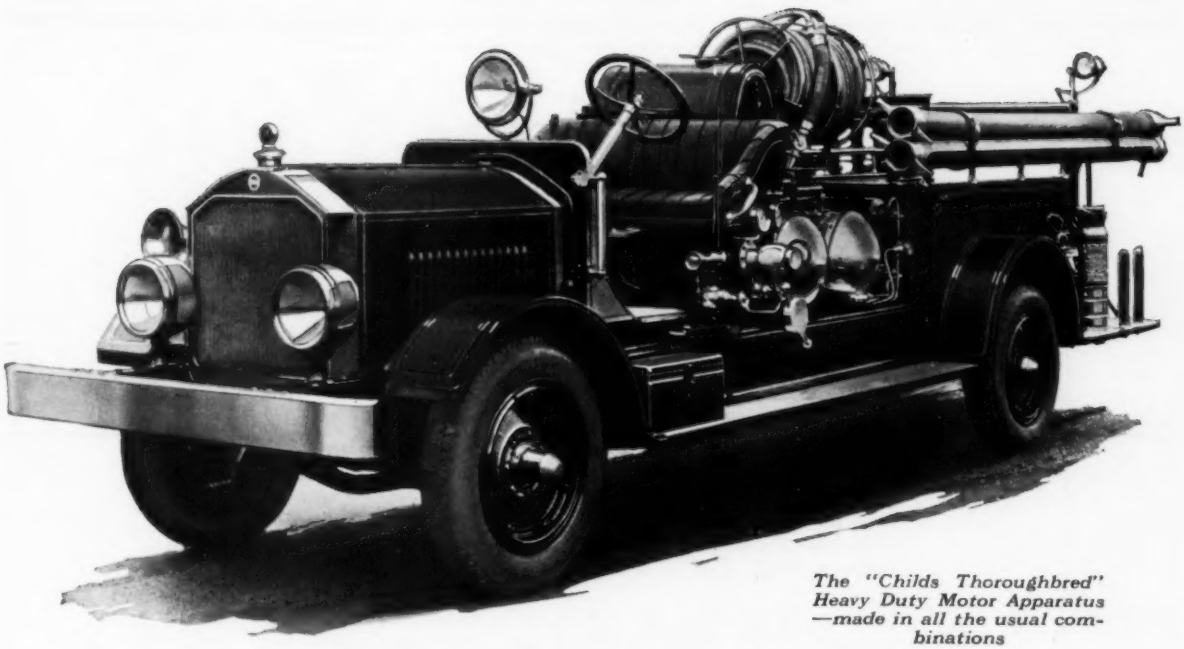
We are ready at any time to demonstrate, both in theory and practice, the superiority of this *modern* fire hydrant.

DARLING VALVE & MFG. COMPANY
Williamsport, Pa.

New York
Chicago

Oklahoma City
Houston

DARLING
FIRE HYDRANTS



The "Childs Thoroughbred" Heavy Duty Motor Apparatus —made in all the usual combinations

A rugged, fighting bearcat— armed to the teeth!

the "CHILDS THOROUGHBRED"!

A HEAVY duty champion—an "up and at 'em" fighter—this "Childs Thoroughbred"! Sleek and trim, with speed to spare in any emergency and stamina that means years of service.

Beneath its rich, handsome finish is a steel frame of tremendous strength. Behind the quiet purr of its motor lurks a world of power.

An apparatus that can handle the severest assignment with ease. And in appearance, a blue ribbon winner!

Our literature tells the whole story.

Foamite-Childs Corporation, Fire Protection Engineers and Manufacturers, 371 Turner Street, Utica, New York. Sales and Engineering Representatives in all leading cities. Foamite-Childs of Canada, Ltd., Toronto, Ontario.

Foamite-Childs Protection

A Complete Engineering Service

Against Fire

Some Straight Facts

For Cities, Towns and Large Industrial Plants

SIRACODE SIGNAL CORPORATION is the *only* "Scientific" manufacturer of Sirens in America. These are marketed under the trade name "SIRACODE." All other makes are identical to each other, embodying age-old principles of construction long ago discarded by this company. In view of these facts the following exclusive advantages can be enjoyed only in SIRACODE:

1. **Instantaneous Coding types operating in conjunction with any standard box system, or thru our recently perfected WARD System. We do not reverse the current or apply brakes to our instruments in an endeavor to produce code signals. Our experiments have shown both methods inefficient and unsatisfactory.**

2. **Advanced construction (Parabolic principle) creating greater air volume, hence producing more powerful and penetrating tones, with far greater range than possible with the old types.**

3. **Complete control of sound waves which can be *projected in any desired direction* or evenly spread over a given area.**

4. **On the smaller apparatus types, specially constructed motors so powerful yet consuming so little amperage that drain on batteries is eliminated, making it unnecessary and inadvisable to install any types which require the disfiguring, rebuilding or substitution of parts in your cars or apparatus.**

5. **In large congested cities it is impossible to rely solely on any siren *attached to the apparatus* to clear traffic. This must be done *before* the apparatus arrives. We have recently perfected an instrument especially for this purpose which can readily be attached to street boxes, traffic signals or poles. These instruments function automatically when box is pulled, or thru central station, completely clearing the path the apparatus is to take.**

6. **When you install anything but SIRACODE you are not getting the newest, latest or best.**

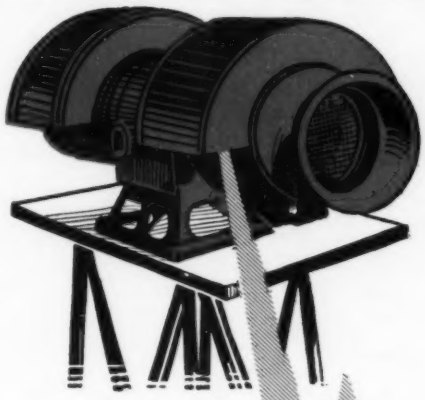
Write for full descriptive literature

SIRACODE SIGNAL CORPORATION

***(Formerly Heath Engineering Laboratories)*, 354 Pine St., San Francisco, Calif.**

SIRACODE

Sirens For Every Purpose



Ready Now!

for Delivery
for Demonstration
for Comparative Tests

THE NEW STERLING CODE-BLOWING SIREN

The Only Siren Designed Solely for Blowing Code Fire Alarm Signals

An entirely new development in electric fire alarm signals! Like the famous Sterling Model "M" in dependability and ability to be heard at great distances and as distinctive in tone—otherwise different.

The motor is designed and built for rapid acceleration. Operated by hand lever, by central station transmitter or from box system. Runs on any 220-v circuit. GUARANTEED BEST in its field!

Your own box system is easily adapted for use with this new siren, or a Sterling box system may be economically installed. No batteries required, box operation on 110-v system.

The Newest Product of the Oldest Makers of Fire Alarm Signals in the Country. Write for Particulars.

THE STERLING SIREN FIRE ALARM CO., INC.

61 Allen Street
Rochester, New York

For Twenty-Five Years, Manufacturers of Fire Alarm Signals Exclusively

PHANTOM BOXES will reduce fire loss

The only company engaged exclusively in manufacturing, selling and installing Fire Alarm and Police Signaling Systems through its own organization.

Give a number to every street corner in your city which at present has no fire alarm box. Consider each corner as being the location of a "Phantom Box." When a telephone alarm is received transmit the number of that corner.

If the "Phantom Box" Plan is carried out faithfully it will save time and minimize confusion in the transmission of the fire alarm to the engine house. It will speed up the arrival of the fire apparatus by giving the firemen a definite point to which to drive. Thus, their more prompt arrival will reduce the fire loss.

Back up the "Phantom Box" Plan by a yearly program that calls for the installation of a definite number of boxes in the "Phantom Box" locations where they are needed most. By following this plan your box system can be brought up to a point of adequacy which can be maintained year after year, giving your city the utmost protection from its fire alarm system.

The Gamewell Company

Newton Upper Falls, Mass.

"A Box A Block"

FIRE ENGINEERING

(A Consolidation of Fire and Water Engineering and The Fire Engineer)

The Journal of the Fire Protection Profession

VOLUME LXXX JUNE 29, 1927 NUMBER 13

How Hartford Handles Fire Traffic

Drastic Laws and the Installation of Equipment Keeps Lanes Clear for Apparatus; Satisfactory Results

By JOHN C. MORAN, Chief of Fire Department, Hartford, Conn.

STATIONARY traffic is hazardous—it may be safe as far as the pedestrian is concerned but it is dangerous to the proper operation of the fire department. At a recent fire, parked automobiles and narrow streets hampered the apparatus in getting to and from the fire, and luckily it did not result in serious consequences.

Chief John C. Moran, Hartford, Conn.

A request was made to the city council that in conjunction with the opening of the new fire headquarters, that a law be enforced permitting parking on one side of Pearl street. We have been very fortunate in Hartford in not having any fires of serious magnitude but that does not alter the import of the problem.

The retail business section of the city is crowded in one small area, and it is probable that other cities are up against the same problem. There are many narrow streets here with parked lanes of automobiles. A fair sized fire in many parts of the business section, accompanied by a high wind, might raise havoc.

Problem Not Appreciated

There is only one way that it is possible to impress the seriousness of the problem on the public and that is to have a fire of large proportions.

There are two solutions to the problem—one possible but not practical and the other practical, but in some cities, it seems hardly possible. One plan is to have some of the merchants move to outlying sections of the city in order to relieve the congestion. This is hardly practicable. The other is to enforce very drastic traffic and parking rules throughout the business district. This is practicable but in many instances the merchants will object to such laws.

Trouble Starts at Fire

With the sirens and other warning apparatus on the fire trucks, we have excellent means of opening a lane for the fire apparatus going to the fire. The trouble really starts when the fire is reached because due to the parking of the cars, it is impossible to get close to it.

This serves as an introduction of how serious conditions really are, and I am sure that the description that I have presented, is a counterpart of what is happening in many cities throughout the United States.

How Hartford Deals With Traffic

In this city, the warning system consists of electric sirens located at the principal congested corners and intersecting streets in the congested business section of the city. We have selected the electric siren because there is a state law confining its use in streets to fire or municipal apparatus.

The power for operating these sirens is furnished by a 220 volt alternating current motor which is connected to a 125 volt direct current generator located in the battery room at the fire alarm office.

When an alarm is received at fire alarm headquarters, the first blow starts the motor generator operating the necessary sirens. At the present time there are twenty traffic sirens installed, and the generator that we use will furnish current for forty 110 volt electric sirens of the type that we use.

When the sirens are operated at full speed, they produce a shrill whistling sound that is far reaching. It is necessary that these units be operated at full speed, as the sound produced is not as far reaching when the speed of the rotating element is reduced.

In order to prevent the danger of the sirens being operated at a reduced speed, we have installed on the siren circuits what is termed a "general alarm control." This device insures a proper tone effect from the sirens by graduating the tone up and down the scale and preventing the sirens operating at one steady tone. The current then passes to a common bus bar and through a 2½-ampere fuse to individual switches located on the telephone switch board to operate each traffic horn circuit.

Sirens Located Above Fire Alarm Boxes

Nearly all of our fire alarm circuits are underground and wires included in all cables for siren and department telephone use, and nearly all of the sirens are located on extensions placed on top or above fire alarm boxes thus making it very convenient for connecting up these sirens where ever needed.

Method of Operation

The manner in which these signals are operated upon the receipt of an alarm is very simple as all switches for closing the necessary siren circuits are located on the telephone switchboard. The switches are all numbered and one operator is constantly on duty at the desk. There is another operator on the floor who relieves the desk man at stated intervals.

The assignment cards on the desk have siren switch numbers printed under the box number on the card so that there is

"Since this traffic signal system was installed, we have had no reports that even one company had been delayed in responding to an alarm. This system has been in operation for seven years, so that it cannot be said to be in the experimental stage."

nothing complicated when a fire alarm is received. Upon receipt of an alarm, the operator exposes the card of that box from his file and he then knows just what switches to close in accordance with the directions on the card. The sirens will start operating on all the corners that the apparatus will pass by on the way to the fire. The sirens operate on both still or bell alarms.

When an alarm is received, a red bulls-eye light shows on the switchboard. This indicates to the operator that the generator is working, and the light remains illuminated until the siren current is turned off. The current remains on about two minutes or until all companies have passed the siren locations.

Credit Due to E. A. Sullivan

This system has worked very successfully and much credit for this is due to E. A. Sullivan, superintendent of the fire alarm system who gave considerable thought to the installation of this system. Since this traffic signal system was installed, we have had no reports that even one company had been delayed in responding to an alarm. This system has been in operation for seven years, so that it can not be said to be in the experimental stage.

The only trouble that we do experience is that occasionally after arriving at a fire, especially in narrow streets, parked automobiles have obstructed and slowed up the operations of the department. This trouble is, I am sure, quite general in all cities and is quite a serious problem. Drastic parking regulations is the sure cure for this, especially in narrow streets.

In starting a system or a code of laws that would do away with the parking evil, it is almost certain, that the chief will step on the toes of some one—there will be a howl from a number of the merchants that the rules have injured the volume of their trade. This complaint should not be treated lightly, for there is a direct relation to parking rules with the healthy condition of business.

But it is a question of fire and business, and by stating your case before the local chamber of commerce, it will be possible to have the merchants see that what the chief is trying to do is for the best interests of the city, and that no direct injury is intended for any one.

There has been much written and said on the subject of traffic and there will be probably much more written and said before some universal cure is found. But meanwhile, it is up to the chief to tackle the problem, concerned only with conditions in his city and the bearing that it has on the fire service.

WHAT ARE SALVAGE VALUES OF MERCHANDISE AFTER FIRE?

Report Prepared on the Value of Various Types of Material After They Have Been Damaged by Smoke and Water

Gloves

Leather gloves are very susceptible to damage principally due to stitching rotting and clasps or fastenings rusting. Dress and walking gloves if damaged are very hard to sell unless they have sufficient weight to be used as working gloves.

Damaged gloves other than leather will sell at a reduced price.

Gloves should be salvaged promptly, and as kid gloves sometimes mildew in stock, care should be taken to differentiate this damage from water damage.

Grain

Grain is usually seriously affected by fire; is subject to swelling which may burst the walls of the building in which stored, and generally ferments. Salvage should be handled promptly.

Handkerchiefs

These when smoked or water stained are generally sold "as is," although the more expensive grades are sometimes laundered.

Hardware

Hardware, both finished and unfinished, is very susceptible to water damage. Frequently stocks of hardware become damaged by their remaining in damp places without actually coming in direct contact with water. In such cases the only possible method of salvage is to heat and ventilate the premises by forced ventilation, using portable fans, and removing the water from the premises as quickly as possible. Many hardware manufacturers have taken this damage into consideration, not from the viewpoint of fire loss, but from the standpoint of shipping. Stock in transit frequently remains in damp freight houses and may be subject to moisture and dampness on drays, etc. To guard against this danger many articles are wrapped in oiled paper. Hardware manufacturers could carry this practice further and include other articles, such as screws, bolts, nuts, nails, and other rough hardware now being packed in common cardboard boxes and kegs which might be lined with heavy waterproofed paper.

Proper shelving and bins should be constructed to accommodate this class of stock in wholesale and retail stores.

House Furnishings, Table Linens, Towels and Domestics

Sheets, pillow cases, table linen and towels are only damaged by water, as far as salability is concerned. Towels sometimes have colored borders and these may be affected.

Silkolines and cretonnes are usually prints, and for this reason the colors will readily run.

Blankets are shrunk before being finished, and water will shrink them little, if any. As in other goods, the poorer the quality, the greater the damage.

Curtains in the best quality are usually not dressed and will not be damaged greatly by water. In the cheaper qualities, the starch will soften and the curtain will lose its shape. Strong smoke, or intense heat, will draw the mesh of curtains and materially damage them.

Comforters are filled with either shoddy, cotton, wool or down, and are covered with various materials, such as silkoline, cretonne, silks or satins. The down or wool fill can be renovated or restored to normal condition after either smoke or water damage. If the comforter is of a better grade, it will usually be worthwhile to consider recovering and if necessary, renovation. The poorer qualities will not justify this expense. The cotton or shoddy filled comforters will pack when wet badly and are then of no value.

Jewelry

The damage to expensive jewelry by smoke and water is not likely to be heavy, due to the care used in storing. Jewelry of the higher grades can, if wet, be refinished and polished at a small cost. Cheaper grades suffer, like hardware, and reconditioning is costly. Jewelry cases are often covered with dust covers after hours. These dust covers should be made of a light rubberized material.

Shelves and cases are generally easily covered, although clocks hanging on walls and cases against the wall without clearance present difficulties.

Laces and Trimmings

The damage to a trimming lace is much greater than to an ordinary wash lace. A wash lace is nearly always put on a garment that will be washed before it is used, while a trimming lace is put on a garment not intended to be washed. Very few laces look as well after washing as before, and washing naturally shortens the life of any material. Laces with any dressing or filling are seriously affected by water.

(*Continued on page 656*)

[*] Continuation of a report read before the annual meeting of the National Fire Protection Association at Chicago, Ill.

Amusement Park Center Destroyed by Fire

The Beach Arcade, a well known spot to those who visited Asbury Park, N. J., was destroyed by fire which resulted in a $200,000 damage There was a high wind blowing at the time, and for some moments, the firemen believed that the fire would spread to the Berkley Cateret Hotel on the boardwalk which was recently completed at a cost of $1,000,000. The burning arcade attracted thousands of people who went to spend a week end at the popular summer resort.

Handling Distant Fires With Relay Lines

Methods of Bringing Water to the Fire When the Supply is Distant—Advantages of Different Layouts Described

By FRED SHEPPERD, B. Sc., M. E., Managing Editor, FIRE ENGINEERING*

HANDLING the suburban fire presents problems which are distinctly its own.

The usual long stretches required as well as the presence of mains of limited capacity make such a fire one which is hard to effectively combat.

It is the object of this paper to set forth methods of getting sufficient water and pressure at hand to control the remote fire, rather than the treatment of the fire from a fire fighting standpoint.

A Word About Friction

Wherever there is motion there is friction. If it were not for such, there could be no progress. The friction of the locomotive wheels on the rail makes possible the drawing of long trains of cars. The friction of the foot on the pavement gives the traction necessary for progress.

But, in addition to the advantages of friction, there are also many disadvantages. And it is the relation of friction to the production of fire streams that interest us now.

The moment water begins to move in a line of hose, there results a loss due to the friction of the water on the hose lining. The amount of this friction depends upon the speed of flow as well as the interior condition of the hose. Such friction limits the distance we can force the water through hose, and it also limits the pressure available at the nozzle. The longer the line of hose we employ, the greater will be the friction loss.

The faster we force water through the hose, the greater will be the friction loss.

Why Single Long Lines Will Not Do

Now let us see why we cannot use very long single stretches in handling fires, such as are encountered in suburban sections. Take, as an example, a stretch of 3,000 feet of 2½-inch hose. Assume that we are going to have a flow through this line of 200 gallons per minute, which represents the discharge from a 1-inch nozzle with 46 pounds pressure; or a 1⅛-inch nozzle with 29 pounds pressure; or a 1¼-inch nozzle with 19 pounds pressure.

The friction loss in hose in good condition carrying 200 gallons per minute, is approximately 10 pounds per 100 feet. A stretch of 3,000 feet would therefore represent a friction loss of 300 pounds.

If we were employing a 1-inch nozzle which would have 46 pounds pressure, the engine pressure would have to be 300 plus 46 or 346 pounds in order to give us 200 gallons per minute.

Such a layout would have two disadvantages.

In the first place, we would have to operate the pump at an excessive pressure.

Secondly, the hose would be subjected to an unnecessary strain. A medium quality hose after serving several years, might give way under a pressure of 346 pounds.

In the average suburban fire a single 1-inch stream would be of little use. To do effective work both inside and outside of the building a 1¼-inch stream would be required. With the above layout, having a flow of 200 gallons per minute, we would get only 19 pounds at a 1¼-inch nozzle.

If we wanted to use a 1¼-inch tip we would have to figure on a nozzle pressure of around 50 pounds instead of the low pressure previously noted.

At 42 pounds a 1¼-inch nozzle discharges 300 gallons per minute. On this basis, let us figure back and see what engine pressure would be required with a 3,000 foot stretch of 2½-inch hose to give 42 pounds at a 1¼-inch nozzle.

The friction loss in 2½-inch hose where the flow is 300 gallons per minute is approximately 21.2 pounds per 100 feet. For 3,000 feet the friction loss would be 30x21.2, or 636 pounds. Add to this the nozzle pressure, 42 pounds, and we would have a pressure of 678 pounds at the engine—which is impossible from the standpoint of the motor pumping engine as well as from the average fire hose.

Engines in Tandem

It would be possible to create a pressure of 678 pounds by placing two engines in tandem, that is, having one engine pumping directly into the other through a short section of hose such as suction hose. In this case the first engine would have to deliver a pressure of around 339 pounds to the second engine which would boost it a like amount, giving 678 pounds on the discharge side.

It is, however, a question whether the pumping engines are built with sufficient strength to safely maintain a pressure of 678 pounds within their chambers.

Since such a practice is not safe, just how could we secure pressure at the nozzle of a 3,000 foot layout of hose utilizing two pumpers?

Relay Lines

In relay lines we have one engine placed near the source of supply and one or more additional engines spaced along the stretch of hose. The object of using the additional engine (or engines) is to provide necessary pressure to overcome friction in hose without subjecting the hose or engines to excessive pressure.

It is exactly the same principle as is employed in handling long freight trains. For example, where three engines are required to haul a freight train they are rarely placed in a row at the front of the train; not because they would pull any less, but because all of the power being applied at one point would subject the couplers to too great a strain. This difficulty is avoided by placing the engines at different points in the train of cars. For just the same reason pumpers are placed at different points in a long stretch of hose.

But to determine the right point at which a second pumper shall be placed is not always easy. The engine sending the water from the source to the second engine is concerned chiefly with overcoming friction in the hose, while the second engine must overcome the friction in the stretch between itself and the nozzle, and provide a satisfactory nozzle pressure in addition.

Right Point to Place Engine

The first engine in delivering water to the second engine should deliver it at from 15 to 20 pounds where it is operating at 120 pounds pressure or thereabouts. But if the engine is operating at from 200 to 250 pounds pressure, the pressure at which it may discharge it to the second pumper may be from 5 to 10 pounds.

It might be mentioned here that the standard test for motor fire engines establishes the following requirements for discharge at different pressures.

At 120 pounds, engines should discharge full rated capacity.

At 200 pounds, engines should discharge 50% of rated capacity.

At 250 pounds, engines should discharge 33 1/3% of rated capacity.

Where a single line of hose only is used between the first and second engines and the second engine and nozzle, and where the diameter of the hose is the same in both cases, it is a comparatively simple matter to determine the location of the second engine. The following rules are employed.

1. Where engines are operating at a pressure of 120 pounds or thereabouts the length of the hose line from the second engine to the nozzle should be one-half of the length of the line from the first to the second engine.

Where the engines are operating at a pump pressure of 200 pounds or thereabouts, the length of the line from the second engine to the nozzle should be three-quarters of the length of the line from the first to the second engine.

Where the engines are operating at a pump pressure of 250 pounds or thereabouts, the length of the line from second engine to nozzle should be four-fifths the length of the line from the first to the second engine.

Illustrative Example

As an example, suppose two engines are being used in a 2,000 foot line of 2½-inch hose, and that it will be necessary to operate them at 250 pounds pressure. Then the distance from the second engine to the nozzle will be four-fifths of the distance between the first and second engines. The distance from the first engine must then be 4/5 plus 5/5, or 9/5. 9/5=2,000. 1/5 is, therefore, 222.2 feet, and 5/5 is five times as much, or 1,111 feet (approximately); 4/5 is 4 times 22.2 or 888.8 feet, approximately.

Thus the length of hose between the two engines must be the nearest hose-length to 1,111 or 1,100 feet (there being only 50-

* Read at New England Association of Fire Chiefs' Convention.

foot lengths in the line). The length of hose between the second engine and nozzle will be equal to 2,000 minus 1,100 or 900 feet.

In problems of this sort, the pressure at the hydrant is seldom considered, for stretches of this nature are usually made in suburban sections of cities where the mains are small in diameter and where the pressure rapidly drops when fire lines are put into operation.

If layouts between first engine and second, and second engine and nozzle are not the same insofar as hose diameter and number of lines are concerned, then the layouts must be reduced to 2½-inch single lines by the factors provided therefor and checked up to see that they correspond to the rules for relay lines given above.

Where Parallel Layouts are Used

Suppose it is desired to force water a distance of 3,000 feet and that sufficient hose is on hand to run parallel lines between the first and second engines and a single line from second engine to nozzle. Assume further that 1¼-inch nozzle is desired.

The method of solving would be as follows:

The third rule will be used, assuming the engine pressure 250 pounds or thereabouts. The length of the line from the second engine to the nozzle should then be 4/5 the length of the line from first to second engine.

But in figuring the length of line between the first and second engine we must take into that we have parellel lines here and they must be reduced to the equivalent (from a friction standpoint) of a single line. This would be done, were the lengths known, by dividing by 3.6, which is the factor for changing parallel lines of 2½-inch hose into a single line of 2½-inch hose. And the length of the single line in the layout will be 4/5 the length of this combined line.

But the parallel lines are 3.6 times the length of the single line equivalent to them. This is just another way of saying that we divide the two parallel lines by 3.6 to get the equivalent in a single line.

Now the single line attached to the nozzle is 4/5 times the length of the single line representing the combined parallel lines. And the parallel lines themselves are 3.6 times as long as the combined single line which represents them. Thus the entire layout from the first engine to the nozzle would be 3.6 plus 4/5 (which is equivalent to .8) times the length of the resultant single line between the two engines. We know that the total length of layout is 3,000 feet. If this represents 4.4 times the length of the single line (which was gotten by combining the two parallel lines) such a single line would be equal to 3,000 divided by 4.4 or 680 feet.

This then is the single line equivalent to the parallel lines running between the first and second engine. As noted before, the line from the second engine to the nozzle is 4/5 of this or 544 feet, or approximately 550 feet.

The combined line representing the two parallel lines between the two engines is equal to 680 feet. If we change this back into parallel lines we multiply by 3.6, getting 2,450 feet, approximately as the distance between the two engines.

The layout would then be as follows: From first engine to second engine a distance of 2,450 feet, through which distance are laid two parallel lines of 2½-inch hose to the second engine. From the second engine to the nozzle, the distance 550 feet, through which distance a single line of hose is stretched to a 1¼-inch nozzle.

The above calculations may seem a little involved. But this is largely due to the fact that the various calculations are not shown in writing.

It will be found that they are very simple and can be done for any layout in a minute or so.

Long Lines Needed at Suburban Fires

To sum up: In handling the remote suburban fire we are faced with the necessity of making long stretches. The limited supply of hose carried on apparatus makes necessary the use of single lines in many cases and where more than one engine company is at hand relay lines make effective streams possible.

A 1¼-inch stream is the smallest stream considered satisfactory for such fires where they may have to operate outside and inside as well.

As suggested in the early part of this paper, relay lines may employ two or more engines. In cases of necessity three or four engines might be hooked up. In the latter instance, however, it would be quite difficult to make calculations as to the proper placement of the engines and instead of endeavoring to determine by calculation just where the engines should be placed, it is a satisfactory practice to space them equally in the line. This would mean that the first engine would be placed at the hydrant, and the lengths of hose between the first and second engine, the second and third, third and fourth, fourth and nozzle, would be approximately the same.

So important is the subject of relay lines, and so essential is it considered by fire department authorities, that the New York Fire College has added as their latest evolution a problem in laying out relay lines.

NO DISCRIMINATION ALLOWED IN N. Y. F. D. DIVISION

Captain McCarthy, of the Division of Public Assembly, N. Y. F. D., Points to Mayor Walker's Words When a Favor is Asked

ON the wall of the office of Capt. John J. McCarthy at Fire Headquarters in New York City where he is in charge of the Division of Public Assembly which has to do with amusement enterprises, theatres, boxing shows, baseball parks, amphitheatres, and licensed assemblages of any kind, is a printed sign which runs in the accompanying form:

Captain J. J. McCarthy, New York Fire Department

Every once in so often, the captain is approached from the outside with a view to having him wink at this or that section of the law which might at the moment be operating just a little too realistically against some alleged friend of the administration.

McCarthy is a rather prudent sort of young fire officer, actuated by a high and moral sense of public duty. He'll stretch a point within reason and safety, but since he owes his assignment or post of duty to nobody—didn't seek it in the first place—wants to get back to his truck company to study for the next promotion examination to Battalion Chief (he was No. 1 on the list for Captain), he naturally will not allow anybody in or out of the department to compromise him and goes along on the line of duty first, which after all, is the best policy and means that any Fire Commissioner or Fire Chief can place his head on his pillow every night of his tenure of office and go peacefully to sleep as far as the Division of Public Assembly is concerned, with Capt. McCarthy in command.

A STATEMENT
BY
Mayor JAMES J. WALKER
AT
CITY HALL, MAY 24, 1927

"Gentlemen, I know no discrimination in any law when it comes to enforcement. If a law is wrong the only place to change it is in the Legislature, the only place where it can be changed. I propose to meet every responsibility placed upon me to safeguard the lives of the residents of this city."*

Therefore, when "friends" of the administration come in, to seek this or that "small favor"—McCarthy points to the sign, and smilingly adds—"Those are my sentiments, too."

WM. JEROME DALY.

*This is what the Mayor told a committee of realtors who appealed to him for relief from the law which prohibits cooking in so-called apartment-hotels.

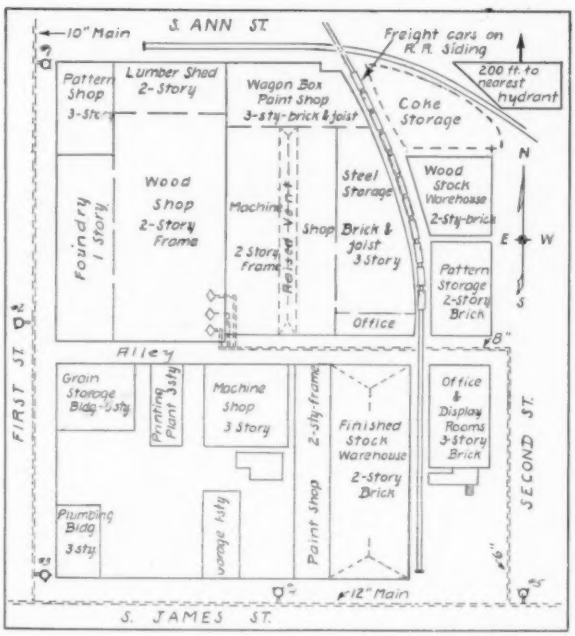
Use Full Capacity of Your Pumpers

Here is One Fire Which Emphasizes the Results of Only Partly Utilizing Facilities Available

THE fire described in the last issue of this journal, and the methods of handling it, establish very definitely the danger of employing only a part of the capacity of the equipment rolling in on the first alarm.

Efficiency in fire fighting, as another work, depends upon the utilization of all facilities to the maximum capacity. If each pumper responding to an alarm is called upon to deliver only half its capacity, a greater number of companies will be required to do the work which could be accomplished by the apparatus on hand.

In the case of fire fighting, it is not the lack of economy by utilizing only a portion of the power of the apparatus that



counts, but the delay incidental to waiting for additional pumpers to arrive and to do work which could be done by the first apparatus rolling in.

In the handling of this particular fire it will be noted that the department stretched but a single line from each pumper, using a 2½-inch hose with 1¼-inch nozzle.

While no dimensions were given on the sketch, it is safe to assume that the stretch from the first company to the fire, as well as from the second company, would not be greater than 200 feet. In this case each of the first two pumpers put in operation could easily deliver two streams of satisfactory pressure to operate on the fire.

Property Involved

The property involved in the fire as shown in the last issue of this journal is indicated in the diagram herewith.

When the fire was finally brought under control it had involved all of the buildings included within the area bounded by First Street, S. Ann Street, Second Street and the alley.

Response to Alarms

The fire department in the city in which this fire occurred consisted of 7 engine companies, all equipped with motor pumping engines of from 700 to 750 gallons per minute each; 3 truck companies, one of which was equipped with an aerial ladder truck and the other two with city service trucks; and 3 hose companies.

Response to alarms is as follows:

First alarm, Engine Cos. Nos. 1 and 2; hose Co. No. 1 and Truck Co. No. 1 (equipped with aerial truck).

Second alarm, Engine Cos. Nos. 3 and 4, Hose Co. No. 2 and Truck Co. No. 2 (city service truck).

Third or general alarm, Engine Cos. No. 5 and 6, Hose Co. No. 3 and Truck Co. No. 3 (equipped with city service truck).

Engine Co. No. 7 is rarely called and is only summoned by special call only.

Water pressure in the mains around the plant was in the neighborhood of 60 pounds at all times and a liberal supply of water was available.

The Fire

As shown in the sketch, a string of box cars had been shunted to the company's siding and permitted to remain there overnight. Fire started in one of these cars and was discovered about 1 a. m. At the time of the discovery several of the box cars had become involved. Apparently the fire was started in a car by tramps who had a fire on the floor to keep themselves warm. At the time the fire was discovered the wind was blowing the flames and smoke toward the wagon box paint shop as shown in the diagram. A box was pulled by a passerby, bringing out a first alarm assignment.

Upon the arrival of the first company fire had fully involved three box cars and also entered the paint shop through broken window panes.

How the Fire Was Fought

Engine Co. No. 1 was placed at hydrant No. 1 and a single line stretched along South Ann Street to operate on the burning box cars. A single 2½-inch line with 1¼-inch nozzle was employed. This line operated for a few minutes on the first two box cars and then was stretched to operate into the paint shop which was opened up by members of Truck Co. No. 1.

Engine Co. No. 2 was placed at hydrant No. 2 and a single line stretched with 1¼-inch nozzle to the paint shop.

Hose Co. No. 1 was placed at hydrant No. 5 and a single line stretched with 1⅛-inch nozzle, to operate on the burning box cars.

Truck Co. No. 1 assisted in opening up as noted above, and also assisted in the laying of this last line.

The fire in the paint shop was spreading fast and it required the efforts of the two lines from the engine companies to keep the fire from involving this three story building. The stream from the hose company was insufficient, due to the long stretch of line, to kill the fire in the box cars. It continued to operate, nevertheless, in the hope that one of the lines operating in the paint shop would soon be available to finish up the job in the box cars. But after operating for around five minutes one of the cars containing potash took fire and a flare occurred, sending a sheet of flame broadside from the car into the coke storage space as indicated in the diagram.

Second Alarm Transmitted

The small stream from the hose company was worthless from this point on for holding the fire in the cars. At the same time the wind carried the heat along the box cars and it swept the front of the wood stock warehouse to the south of the coke storage.

At this point a second alarm was transmitted, but before the apparatus arrived the coke storage was well ablaze and the wood stock warehouse to the south seriously threatened.

The assignment of apparatus on the second alarm was as follows: Engine Co. No. 3 was placed at hydrant No. 4 and a single line stretched to the box cars using a 1¼-inch nozzle.

Engine Co. No. 4 was placed at hydrant No. 3 and a single line stretched with 1¼-inch nozzle to the wood storage warehouse, in an effort to prevent the fire from entering this building.

No line was stretched from the hose company on the second alarm because of the unsatisfactory stream delivered by the line from Hose Co. No. 1. But even with this additional apparatus the fire continued to spread, largely due to the intense heat given off by the potash.

Third Alarm Sent In

Additional cars took fire and soon the brick and joist three story building was in serious danger of becoming involved.

At this point a third alarm was transmitted.

Upon the arrival of the first companies on the third alarm

(*Continued on page* 658)

The Chiefs and Their Guests in Attendance at the New England Association of Fire Chiefs' Convention,

New England Chiefs Join International

New England Association of Fire Chiefs, in Convention at Portland, Me., Vote to Affiliate with International in a Body—Many Interesting Papers Presented—Chief Shepard of Pittsfield, Mass., Elected President—Next Convention Goes to Burlington, Vt.

THE Fifth Annual Convention of the New England Association of Fire Chiefs, held at Portland, Me., June 21–23, went on record as being one of the best so far, from the standpoint of business transacted.

An outstanding feature was the unanimous vote to have the membership in a body join the International Association of Fire Chiefs, carrying out the recommendation of the Board of Directors. Jay W. Stevens, Executive Secretary of the International came all the way from San Francisco to attend the Convention and explain the advantages of this membership affiliation.

Chief W. C. Shepard, Pittsfield, Mass.

The business sessions, all fully attended, were held in the main ballroom of the Eastland, a newly constructed hotel completed just in time to take care of the Convention. An unusually good exhibit was housed in the spacious Exposition Building, and while it was a half mile or so from the headquarters hotel, regular bus service provided without charge by the Local Committee assured a large attendance.

Chief Sanborn, the Convention host, did everything possible to make the visitors feel at home. A banquet and dance at the Eastland Hotel, and an automobile ride around the city featured the entertainment and while the chiefs were in session the ladies were taken on various interesting sight-seeing trips. Clear, comfortably cool weather helped make things even more pleasant.

Burlington, Vt., won the next convention, with Providence, R. I., a close second. An invitation had also been received from Northampton, Mass.

The election of officers resulted as follows: President, Chief Wm. C. Shepard, Pittsfield, Mass.; First Vice-President, Chief Oliver T. Sanborn, Portland, Me.; Second Vice-President, Chief Frank Charlesworth, Providence, R. I.; Secretary-Treasurer, Chief John W. O'Hearn, Watertown, Mass. (re-elected); Sergeant-at-Arms, Chief David A. DeCourcey, Winchester, Mass. (re-elected). Nomination for the Second Vice-Presidency had been declined by Chief Charlesworth, but he was elected none the less.

The convention was opened at 10 a. m. Tuesday by the President, Chief Charles W. French of Manchester, N. H., with invocation by Rev. C. O. Smith of the Church of the Messiah. Addresses of welcome were then made by Gov. Ralph O. Brewster of Maine, Philip J. Deering, Chairman of the Portland City Council, and Chief A. J. Sanborn of Portland, to which Chief John C. Moran of Hartford responded.

During the memorial services which followed, only one name appeared on the roll call of members that had passed away during the year—that of Chief Robert Browning of Central Falls, R. I., who was killed while at a fire. Rev. Dr. Henry Stiles Bradley delivered the memorial address, and after selections by a quartet, the session adjourned.

The afternoon was given over entirely to inspection of the exhibits, which practically all the chiefs took advantage of. An automobile trip for the ladies included a stop at Cape Elizabeth, where they were entertained by the Ladies Auxiliary of the Fire Department.

Convention Considers Committee Reports

The first business session, in the evening, opened with the presentation of the various committee reports. President French announced the appointment of P. Hildreth Parker, Geo. W. Austin and Herbert K. Pratt as the Registration Committee, and Chief L. E. Reif of New Haven, Chief Patrick J. Hurley of Holyoke and Chief Selden R. Allen of Brookline as the Committee on Courtesies. Word was received at this point that Chief Edw. F. Dahill of New Bedford was seriously ill and had just undergone a major operation, the nature of which was not mentioned. It was voted to send flowers, together with a telegram of sympathy. A telegram of greeting from Chief Bogan of Baton Rouge, La., was read. The New England delegation were guests of Chief Bogan last October following the International convention at New Orleans.

Next was read a letter from Chief Howard L. Stanton of Norwich, Conn., protesting against the proposed affiliation with the International Association of Fire Chiefs. No action was taken on this letter and it was ordered filed.

A communication was also read from Commissioner Foote of the Massachusetts Dept. of Public Safety, stating that he considered the present regulations in his state governing the use of oil burners as sufficient and that changes suggested by the New England Association were not necessary at this time.

A paper "Tire Equipment" was then presented by L. D. McGeary, who illustrated his talk with motion pictures. He explained the construction of tires used on fire apparatus and gave pointers on their proper care. In answer to a question as to when pneumatics should be replaced, he said that the way tires are made today they can be run safely until actually worn out.

"Problems Met With in the Lubrication of Automotive Fire Apparatus" was the next topic, by W. S. Marsden. Among other things, Mr. Marsden pointed out the importance of changing crank-case oil at least every thirty days where there is the practice of daily house-running of the motor.

Picture Shown on Ventilation

An interesting motion picture followed, showing how the New York Fire Department ventilates at fires, and demonstrating what happens when the department does not ventilate. The film,

Assembled in Front of the New Eastland Hotel on Wednesday Morning for the Official Photograph

which was brought to the convention by Deputy Chief Thos. Dougherty of New York, was taken at the N. Y. Fire College, where they have a specially constructed building for such smoke experiments.

Round Table Discussion

Several matters were presented for the Round Table Discussion, which was next on the program. The most important of these was a suggestion that the International Association of Fire Chiefs be called upon to use part of the fund derived from the proceeds on the "Fire Brigade" to make a study of the relation between insurance and excessive fire losses. After considerable discussion on the problems of overinsurance, a resolution embodying the suggestion was unanimously passed.

Another suggestion was that a committee be appointed to study firemen's wearing apparel with the idea of bringing about a change in the customary uniform along the lines of the lapel collar design recently adopted by the Army and Navy, and that the overcoat be of the new New York type. This was voted down after several expressed the feeling that the design of uniforms was entirely a local matter.

Other questions asked were: "What jurisdiction has a city over scows converted into gasoline stations?"; "Should gasoline tank trailers be declared a menace and ruled off the streets?"; "Should chimney sweeps be licensed?"; but these matters were passed by without discussion. Following the session, a demonstration of searchlights was given outside of the hotel. A special searchlight car, brought to the convention by the Lawrence, Mass., Gas and Electric Co., and equipped with a battery of powerful portable flood-lights, was used to show how buildings could be illuminated at night from the outside to enable firemen to see what they are doing.

During the evening a theatre party was given for the ladies.

What Happened the Second Day

Wednesday morning's session opened with a paper "Handling the Distant Fire With Relay Lines" by Fred. Shepperd, Managing Editor FIRE ENGINEERING. (This paper is published in this issue.) Next came an address on "Traffic Problems" by Thomas Goode, Dept. Supt. of Police, Boston. Several practical suggestions were made by Supt. Goode for overcoming some of the traffic difficulties that fire departments meet. (An abstract of this paper will appear in a later issue.)

The next speaker, Jay W. Stevens of San Francisco, State Fire Marshal of California and Executive Secretary of the International Association of Fire Chiefs, brought the chiefs to their feet with an enthusiastic welcome. Stevens outlined the great fire prevention plans of the International and strongly urged favorable action on the proposed plan of membership affiliation as a means of bringing about the organized strength necessary to give the fire chiefs leadership in all matters pertaining to their profession. After a rising vote of thanks to Stevens, it was unanimously voted to bring the membership into the International in a body and accomplish a sectional tieup similar to the Pacific Coast and other divisional units throughout the U. S. and Canada.

Chief Wm. Daley of Brockton strongly advocated the affiliation plan, as did Chief O'Hearn, the secretary-treasurer. Chief O'Hearn stated that the dues in the International—one dollar a member—could be paid regularly out of the treasury without the necessity of increasing the New England Association's present dues of Three Dollars.

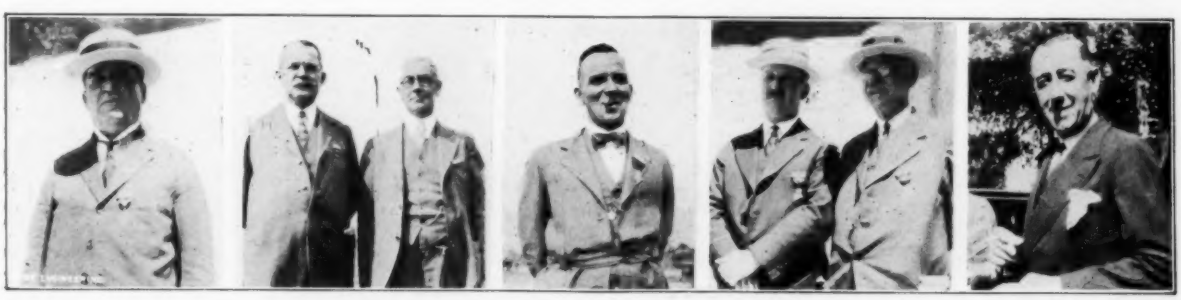
Percy Bugbee, scheduled for a talk on "The Campaign of the National Fire Protection Association" was unable to be present and Franklin Wentworth spoke in his stead. His organization is out to raise a fund of $500,000, Mr. Wentworth said, for the purpose of financing a larger field staff and bringing about a more general adoption of the "firechief's cabinet" idea.

In discussion that followed, Chief Casey of Cambridge brought out the fact that fire loss figures as issued by the underwriters do not make allowance for salvage and that they are based on insurance paid without any deduction for whatever the insurance people get back on salvaged materials. Chief Sennot of Boston, Chief Saunders of Lowell and others mentioned specific instances of this kind and strongly urged that some way be found to remedy this situation. Chief Daley, of Brockton said he has no trouble of that kind as he follows up the insurance salvage companies and sees to it that he gets credit on his fire losses for any return on salvage. It was decided that the study of the relationship between insurance and fire losses, as provided for in previous resolution, should include this matter.

In the next paper "Standardization of Hose Threads," P. C. Charnock, engineer of the New England Insurance Exchange, told of the progress his organization was making in its efforts to standardize hose couplings throughout New England. Mr. Charnock asks the chiefs to cooperate wherever possible in furthering this work.

This session wound up with the selection of the next convention city, Burlington, Vt., winning over Providence, R. I., by a vote of 81 to 53. Determining the meeting place was scheduled for Thursday morning's session, but it was suddenly decided to act on this at Wednesday's meeting because of the number of delegates who were planning to leave for home early Thursday.

The ladies left at 9:30 a. m. for an automobile trip and luncheon at Poland Springs, while the chiefs, directly after the morning session, were taken on a tour of the city with a progressive buffet luncheon served at each of the fire stations and



Some Prominent Figures at the New England Chiefs' Convention

Deputy Chief, Thomas Daugherty, New York city

Chief John C. Moran, Hartford, Conn., and Chief Wm. Daley, Brockton, Mass.

Chief Oliver T. Sanborn, Convention host, Portland, Me.

Chief S. R. Allen and Fire Commr. Easterbrook, Brookline, Mass.

C. B. Rose, new President of American - LaFrance Fire Engine Co.

winding up at the fire extinguisher demonstrations near the exhibit hall. The Foamite-Childs Company gave several tests showing the many applications of the foam method in putting out various kinds of fires. A demonstration of a new carbonic gas extinguisher was also given by the General Carbonic Co. In the evening a banquet and dance was held in the main ballroom of the Eastland Hotel for all the delegates. "Home Sweet Home," sounded at 11.30.

Thursday morning's session opened with a paper "The Use of Phantom Boxes," by W. J. Carroll of the Gamewell Co. (An abstract of this paper will appear in a later issue.) Following came a paper by John P. Crowe, Assistant Fire Warden of Massachusetts. Mr. Crowe explained the causes of forest fires and told how the work of preventing and fighting such fires is carried on in his state.

Foamite-Childs Demonstration at New England Chiefs' Convention Showing New Foam Sprinkler for Oil Fires

Convention Showing New Foam Sprinkler for Oil Fires Top to Bottom pictures showing arrangement before, during and just as the fire was brought under control—a matter of seconds. Bottom view shows large crowd at tests.

Business Transacted the Last Day

An address by Deputy Chief Thos. F. Dougherty of the New York Fire Department on the subject of "General Fire Fighting" was regarded as one the most instructive talks on the program. Without referring to any prepared notes, Chief Dougherty, who is chief instructor of the Fire College, covered various modern phases of fire fighting practice and gave the chiefs a wealth of pointers that they could put to good, practical use. Chief Dougherty attended the convention as a representative of Chief John Kenlon. It was voted that a letter be written Chief Kenlon commending him for sending such an able man as Chief Dougherty.

Because of lack of time, the paper on "Ventilation," to have been presented by District Chief Williams of Lynn, was held over until the next convention.

By unanimous vote, it was decided to amend the by-laws to make Fire Commissioners eligible for active membership. It was also voted to have a committee on hospitality in the future to take care of special guests at the conventions, especially those who are on the program as speakers. A rising vote of thanks was given the Lawrence Gas and Electric Co. for the light truck demonstration.

The Registration Committee reported a total attendance of 632 at the convention, of which 186 were active members, 117 associate, and 329 guests. This compares with a total of 426 at Boston in 1924, 459 at Pittsfield in 1925 and 634 at Manchester in 1926. With receipts of nearly $900 at the convention, Secretary O'Hearn stated that there was now nearly $12,000 in the treasury, after deducting all convention expenses.

The list of attendance is printed on the page opposite.

Detroit Firemen Get Pay Increase

Beginning July 1st, the 1,500 members of the uniformed force of the Detroit Fire Department will receive an increase in pay as follows:

Title	*Old Salary*	*New Salary*
Chief of Dept.	$6,000	$7,000
Asst. Chief	4,500	5,000
2nd Asst. Chief	4,140	4,500
Deputy Chiefs	4,000	4,240
Batt. Chiefs	3,750	4,000
Captains	2,940	3,180
Lieutenants	2,640	2,880
Engineers	2,560	2,700
Firemen	2,400	2,520
Pilots	2,940	3,180
Marine Engineers	2,940	3,180
Stokers	2,400	2,520

It is believed, although not minutely checked up, that the increase given to the firemen makes the smoke eaters of Detroit the highest paid firemen in any cosmopolitan city in the country.

Eighty per cent of the firemen of Detroit are reputed to be home owners and more than half of them drive their own motor cars. Chief Stephen De May, who has been in command since only last winter, has forty-three years of active service behind him and from appearances he looks and acts like a man who is good for a still longer stretch of active service.

The writer recently observed the chief and noted his springy step, his quick eye and alert mentality. He is as straight as a steel rule and has all the earmarks of a twentieth century fire fighter, excepting his gray moustache, an adornment of the fireman of yesteryear.

His subordinates are more pleased with his increase of $1,000 than they are with their own proportionate allowance; such is the affection and esteem in which he is held by those who serve under him. The recent big fire in the Briggs Manufacturing plant "made" Chief De May. His handling of that serious and enormous situation dispelled in the minds of some of the skeptics any doubts they may have entertained prior thereto.

It has been well said "A contented force is an efficient force"—that's the Detroit Fire Department under "handsome" Steve De May.

WM. J. DALY.

Connersville, Ind., Adds to Fire Alarm—A new eight-circuit switch board and an eight-circuit repeater have been added to the fire alarm system of Connersville, Ind. A new battery rack has been also added to take care of the extra load.

Active and Associate Members Who Attended Portland Convention of New England Association of Fire Chiefs

Adams, D. C. Chief, Millis, Mass.
Alger, Fred B., Middleboro, Mass.
Allen, H. M., Ex-Chief, Rumford, Maine.
Allen, Franklin B., Chief, Marion, Mass.
Allen, Selden R., Chief, Brookline, Mass.
Almond, Fred S., Chief, Central Falls, R. I.
Atkins, W. H. H., Chief Marblehead, Mass.
Austin, George W., Boston, Mass.
Bainton, F. S., Boston, Mass.
Baker, Elsworth, Chief, Seekonk, Mass.
Bartlett, Ernest M., Chief, Billerica, Mass.
Barton, R. W., Chief, Foxboro, Mass.
Batchelde, Earl H., Chief, Centerdale, R. I.
Belcher, E. Foster, Winthrop, Mass.
Belcher, Warren H., Chief, Winthrop, Mass.
Belknap, Harry, Boston, Mass.
Belmore, Arthur, Chief, Webster, Mass.
Bensen, Fred E., New York, N. Y.
Berry, W. W., Ex-Chief, Waterville, Maine.
Bills, Louis W., Lexington, Mass.
Black, A. Robert, Chief, Johnston, R. I.
Blair, William J., Ass't Chief, Nantucket, Mass.
Blanchard, Arthur H., Cambridge, Mass.
Blethern, Chester H., Ex-Chief, Auburn, Maine.
Bonner, Robert J., Ass't Chief, Westerley, R. I.
Bowker, Charles W., Chief, South Paris, Maine.
Bradish, F. L., Chief, Eastport, Maine.
Brauner, Henry A., New York, N. Y.
Brown, Henry A., Chief, Marlboro, Mass.
Buckley, John A., Ex-Chief, Augusta, Maine.
Bull, William T., Newport, Maine.
Caldwell, John S., Boston, Mass.
Cameron, Lloyd J., Chief, West Haven, Conn.
Cantara, Frank, Ex-Chief, Biddeford, Maine.
Capwell, Elmer A., Chief, Anthony, R. I.
Carlow, Harry, Taunton, Mass.
Carroll, William J., Boston, Mass.
Casey, James M., Chief, Cambridge, Mass.
Charlesworth, Frank, Chief, Providence, R. I.
Charnock, F. C., Boston, Mass.
Chase, Edward E., Chief, Lynn, Mass.
Chesson, Frederick W., Comm., Waterbury, Conn.
Chevalier, Albric, Chief, Arctic, R. I.
Clark, Fred A., Chief, Attleboro, Mass.
Clark, Horace B., Hartford, Conn.
Clark, W. F., Ex-Chief, Naugatuck, Conn.
Coffin, J. A., Boston, Mass.
Coleman, George H., Chief, Fryeburg, Maine.
Comins, Charles E., Chief, Warren, Mass.
Cook, Frank L., Ex-Chief, Rowley, Mass.
Cook, Harry E., Boston, Mass.
Cowles, A. L., Boston, Mass.
Crossett, Willard E., Ind-Chief, Pittsfield, Mass.
Crowe, John P., Ex-Chief, Westboro, Mass.
Crowley, Roger, Ind-Chief, Manchester, N. H.
Cumming, A. R., Chief, Houlton, Maine.
Currier, John H., Chief, South Windham, Maine.
Daggett, W. H., Chief, Springfield, Mass.
Daley, William F., Chief, Brockton, Mass.
Danahy, Timothy J., Chief, Hopkinton, Mass.
Daunhner, Charles A., Chief, Gorham, N. H.
David, Fred M., Ex-Chief, Groton, Conn.
Davidson, A. E., Hoboken, N. J.
Day, John H., Lynn, Mass.
DeCourcey, D. A., Chief, Winchester, Mass.
Deibel, Andrew F., Cambridge, Mass.
Densmore, George N., Chief, Hallowell, Maine.
Dezotell, B. W., Boston, Mass.
Dix, E. A., Allston, Mass.
Dobbratz, Fred L., Boston, Mass.
Donaher, A. M., Boston, Mass.
Donovan, J. F., Chief, Meriden, Conn.
Donovan, Raymond F., Quincy, Mass.
Doran, Andrew T., Chief, Turners Falls, Mass.
Doyle, Irving T., Chief, Brewer, Maine.
Doyle, John P., Ex-Chief, Wellesley, Mass.
Dreikorn, Otto M., Holyoke, Mass.
Drew, C. R., Chief, Kingston, Mass.
Drew, Morris R., Chief, Valley Falls, R. I.
Driscoll, Timothy E., Chief, Peterborough, N. H.
Duchesneau, Joseph E., Chief, Southbridge, Mass.
Dummer, William, Rowley, Mass.
Dunnigan, F. P., Chief, Westport, Conn.
Dyer, S. B., Ex-Chief, Whitman, Mass.
Eames, Hugh L., Reading, Mass.
Edwards, Fred A., Melrose, Mass.
Egan, John H., Chief, Milford, Mass.
Egger, George, Chief, Westerley, R. I.
Elliot, Daniel S., Portland, Maine.
Endicott, Charles K., Chief, Canton, Mass.
Erickson, John O., Chief Newburyport, Mass.
Estabrook, A. Ralph, Chief, Newton, N. H.
Estabrook, Willard W., Brookline, Mass.
Fallon, M. J., Ind-Chief, Watertown, Mass.
Fitzgerald, Timothy J., Chief, Naugatuck, Conn.
Floyd, Frank L., Chief, Manchester, Mass.
Flynn, Daniel W., Chief, Great Barrington, Mass.
Fogarty, Michael, N. Providence, R. I.
Foy, Albert B., Chief, S. Manchester, Conn.
French, Charles H., Chief, Manchester, N. H.
Frost, Giles F., Chief, Norway, Maine.
Gage, Charles H., Amesbury, Mass.
Garside, John T., Ass't-Chief, Biddeford, Maine.
Gately, John J., Ind-Chief, Watertown, Mass.
Germond, George, Boston, Mass.
Gisborne, F. R., Chief, Sound Beach, Conn.
Glynn, Theodore A., Ex-Comm., Boston, Mass.
Gobeil, Frank, Holyoke, Mass.
Gorham, Joseph T., Boston, Mass.
Graham, Fred D., Chief, Wakefield, Mass.
Grant, Ernest F., Amesbury, Mass.
Grant, L. C., Ex-Chief, Burlington, Vt.
Green, William C., Chief, Concord, N. H.
Greenough, Fred E., Providence, R. I.
Griffin, Charles, Chief, Skowaggan, Maine.
Guertin, William H., Worcester, Mass.
Guilfoile, George R., Waterbury, Conn.
Gunn, William, Jr., New London, Conn.
Haddock, Henry, Lynn, Mass.
Hall, Frank P., Chief, Athol, Mass.
Ham, P. E., Chief, Everett, Mass.
Hamor, Roy, Chief, Bar Harbor, Maine.
Hannigan, John J., Chief, Norwood, Mass.
Hardy, J. M., Boston, Mass.
Harrison, Frank R., Chief, Onset, Mass.
Hathorn, R. C., Chief, West Lebanon, N. H.
Hayes, John H., Chief, Bristol, Conn.
Hawkins, William H., Chief, Haverhill, Mass.
Heitman, Henry H., Chief, Waterbury, Conn.
Heney, John C., Chief, Barre, Vt.
Hill, Charles E., Chief, Cape Elizabeth, Me.
Hill, William H., Chief, Belmont, Mass.
Hiller, Albert E., Chief, Plymouth, Mass.
Hilton, Henry, Gloucester, Mass.
Hodgkinson, B. F., Worcester, Mass.
Hogan, Walter E., Chief, Orono, Maine.
Holmes, J. Harry, Chief, Milton, Mass.
Horne, William D., Chief, Millbury, Mass.
Hough, Willis F., Chief, Lebanon, N. H.
Huart, Victor C., Chief, Farmington, Maine.
Hurd, G. Walter, Chief, Old Town, Maine.
Hudson, David M., Chief, Chelsea, Mass.
Hurley, Patrick J., Chief, Holyoke, Mass.
Hutchinson, Edward J., Chief, Booth Bay Harbor, Maine.
Hyatt, Henry J., Chief, Fitchburg, Mass.
Jenkins, Allen, Asst. Chief, Shrewsbury, Mass.
Johnson Daniel E., Chief, Bridgeport, Conn.
Johnston, Howard S., Boston, Mass.
Jones, Elan B., Chief, West Springfield, Mass.
Joy, Mellen R., Chief, Saugus, Mass.
Judson, Allen D., Chief, Stratford, Conn.
Keane, John W., Marlboro, Mass.
Keene, John H., Allston, Mass.
Kelley, Francis L., Cranston, R. I.
Kelley, Joseph E., Chief, Danvers, Mass.
Kelley, Patrick J., Chief, Apponaug, R. I.
Kennedy, John J., Ind-Chief, Bridgeport, Conn.
Kerrigan, T. Martin, Lewiston, Maine.
Kimball, Howard C., Chief, Salem, Mass.
King, Herbert E., Chief, Mansfield, Mass.
Kleinfelder, Henry C., Boston, Mass.
Koltonski, Alfred H., Chief, Rutland, Vt.
Labensky, Irving F., New London, Conn.
Lawton, Joseph S., Chief, Newport, R. I.
Leonard, Fred A., Chief, Taunton, Mass.
Libby, Oscar C., Chief, Westbrook, Maine.
Liscomb, John I., Cape Elizabeth, Maine.
Logan, Edward A., Chief, Shrewsbury, Mass.
Looney, Daniel J., Boston, Mass.
Lord, Gerald H., Boston, Mass.
Lovejoy, Grover D., Chief, Waterville, Maine.
Lovell, Harry J., Boston, Mass.
Mahoney, Thomas H., Chief, Westfield, Mass.
Mahoney, W. C., Chief, Peabody, Mass.
Main, Charles D., Chief, Stonington, Conn.
Many, Robert, Boston, Mass.
Marchant, Homer R., Chief, Gloucester, Mass.
Martin, Bert L., Mansfield, Mass.
Mason, W. S., Chief, Bangor, Maine.
Maxim, C W., Chief, Middleboro, Mass.
Maxim, E. L., Middleboro, Mass.
McCarthy, Charles L., Chief, Worcester, Mass.
McCarthy, Justin A., Boston, Mass.
McCarty, George S., Lewiston, Maine.
McCoart, Charles B., Asst. Chief, Stonington, Conn.
McCorkle, W. J., Boston, Mass.
McCurdy, George R., Chief, Augusta, Maine.
McGonigle, Michael, Boston, Mass.
McKay, H. L., Chief, Presque Isle, Maine.
McKenzie, George A., Westerly, Conn.
McPhee, Michael, Chief, Lawrence, Mass.
Mead, Alfred L., Chief, Quincy, Mass.
Mehaffey, Ralph E., Chief, Rowley, Mass.
Merchant, Walter H., Jr., Boston, Mass.
Mercier, Solomon A., Chief, Rumford, Maine.
Miguel, Manuel S., Chief, Manchester, Mass.
Milliken, Elbridge H., Boston, Mass.
Milne, George B., Chief, Rockville, Conn.
Minehan, Edward C., Ex-Chief, Marlboro, Mass.
Mitchell, Melvin P., Chief, Hudson, Mass.
Monast, Wilfred A., Chief, Warren, R. I.
Monto, George W., Ex-Chief, Lewiston, Maine.
Montmeny, Arthur, Chief, Chicopee, Mass.
Moore, Edwin D., Bennington, Vt.
Moran, John C., Chief, Hartford, Conn.
Morris, F. J., Ex-Chief, Lawrence, Mass.
Moulton, E. G., Worcester, Mass.
Murray, F. A., Ex-Chief, Boston, Mass
Neary, John H., Chief, Natick, Mass.
Newhall, Terry A., Lynn, Mass.
Newick, Albert E., York Harbor, Maine.
Newman, Frank C., Chief, Melrose, Mass.
Newman, William E., Chief, Hillsboro, N. H.
Nichols, Daniel A., Chief, Barrington, R. I.
Nicolls, John T., Chief, Malden, Mass.
Noble, William F., Chief, New Britain, Conn.
O'Hearn, John W., Chief, Watertown, Mass.
O'Keefe, Vincent P., Peabody, Mass.
O'Neil, E. J., Cambridge, Mass.
Ordway, O. O., Chief, Reading, Mass.
Pachl, John S., New Haven, Conn.
Packard, R. H., Ex-Chief, Attleboro, Mass.
Palmer, S. Pierson, Asst. Chief, Sound Beach, Conn.
Palmer, John A., Chief, Torrington, Conn.
Parker, P. Hildreth, Belmont, Mass.
Partenhemer, Philip, Chief, Greenfield, Mass.
Patt, Irving F., Ex-Chief, Central Falls, R. I.
Persons, Vaney P., Chief, Montpelier, Vt.
Peterson, Leon A., Chief, Whitman, Mass.
Pierce, Walter, Ex-Chief, Arlington, Mass.
Pitt, George S., Chief, Middletown, Conn.
Poor, J. H., Winthrop, Mass.
Pratt, Herbert K., Bridgewater, Mass.
Preble, A. G., Montpelier, Vt.
Qualey, Thomas, Chief, Medford, Mass.
Randlett, Clarence W., Chief, Newton, Mass.
Reardon, William F., Malden, Mass.
Reif, Lawrence E., Chief, New Haven, Conn.
Rees, John H., New York, N. Y.
Rich, S. M., Chief, Somerville, Mass.
Richardson, Irving F., Portland, Maine.
Ricker, Eugene T., Chief, Biddeford, Maine.

(*Continued on page* 659)

A Few Who Were Much in Evidence at the New England Convention

H. Wahl, American-LaFrance, Chief Daniel Johnson, Bridgeport, Conn., and Clarence Stewart, American-LaFrance

Second from left, Jay W. Stevens of San Francisco, with Chief Selden Allen of Brookline, Mass., and Chief Dan'l Sennot of Boston, Mass.

Chief Arthur Montmeny, of Chicopee Falls, Mass., R. F. Donovan of Boston, and Chief Fitzgerald of Naugatuck, Conn.

OHIO FIRE CHIEFS HOLD THEIR LARGEST CONVENTION

Important Discussions of Topics of Interest to Heads of Fire Departments—Excellent Entertainment—Officers Elected

By R. B. CRISWELL,
Engineer, Ohio Inspection Bureau, Columbus

THE Tenth Annual Convention of the Fire Chief's Association of Ohio was held at the City Hall in Mansfield, Ohio, June 7, 8, and 9, starting at noon of the first day. It unquestionably was the largest, most elaborate, and best attended convention ever held by this association. Registration showed that there were about 160 present, including fire chiefs of full paid and volunteer departments, other officers of departments, representatives of the State Fire Marshal's office, the insurance rating bureau, manufacturers of various types of fire apparatus, exhibitors, etc.

Registration was at the convention hall, which is a part of the city building, from 12 o'clock to 1:30 p. m. Promptly at 1:30, the convention was called to order by President William Remy, Chief of the Mansfield Fire Department. Invocation was by Reverend Charles F. Sheriff. Following this, the first address was delivered by F. Leo Smith, secretary of the Ohio board of building standards, Columbus, O. Mr. Smith elaborated upon the work of his department, outlined the history of building from the time of early civilization until the present, showed the advance of construction, and told of the work of his department in trying to improve and regulate methods of building construction.

The next address was by Clarence Goldsmith, engineer of the National Board of Fire Underwriters, Chicago, Ill., on modern fire fighting equipment. Mr. Goldsmith first explained the function of the National Board, its relationship to the insurance companies and to the various rating bureaus and then proceeded to draw on his various experiences and to tell incidents and draw conclusions that would be of invariable service to fire chiefs.

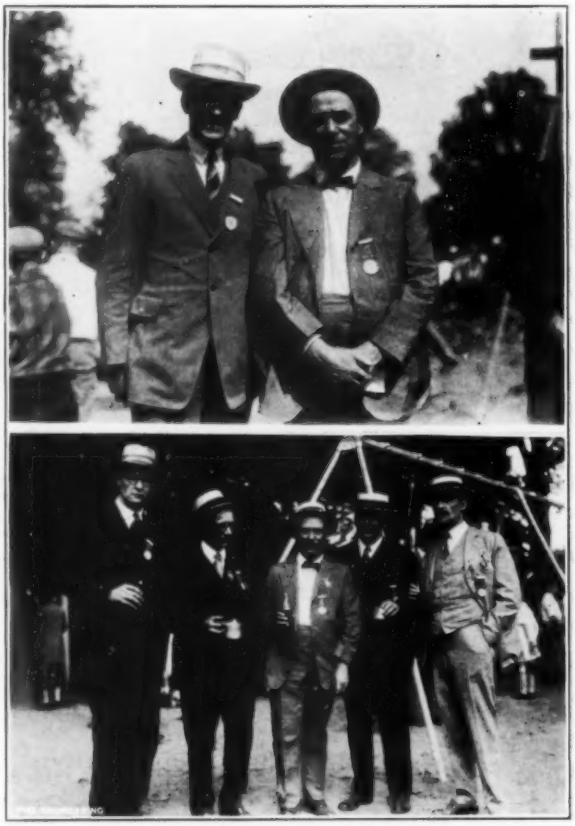
The last address of the opening session was, "Fire Prevention Methods in Industrial Plants," by W. H. Seward, fire chief of the National Carbon Company, Cleveland, Ohio. Mr. Seward pointed out the hazards that are liable to be encountered in industries of his class, urged that the industrial chiefs cooperate more closely with the municipal fire chiefs, and enlarged upon the hazards of some of the newer industrial processes.

On Tuesday evening, the attending members were treated to an extra surprise, being invited to a banquet at the Elks Home, given by the Lumbermens Mutual Insurance Company. The invitations read, "In recognition of the meritorious service rendered by the fire chiefs of Ohio in the interest of fire prevention, the Lumbermens Mutual Insurance Company of Mansfield cordially invites the representatives and delegates of the Fire Chiefs Association to be its guests at a complimentary dinner Tuesday, June 7, at 5:30 p. m., on the Balcony of Elks Home." The Master of Ceremonies was W. H. G. Kegg, Secretary of the Lumbermens Mutual Insurance Company. Following the banquet, all delegates reassembled at the fire department headquarters at 8:15 p. m. and marched to the Ritz Theatre, escorted by the Mansfield Reformatory Band. The entertainment at the Ritz Theatre consisted of the showing of "The Fire Brigade" and also several vaudeville acts put on by members of the Mansfield Fire Department and several out-of-town singers and dancers.

On Wednesday morning, June 8, the convention split up into three separate sections. The chiefs of the paid departments met in the board of health room, at the City Hall, with Chief Joseph H. Speddy, of Lakewood, as chairman. Various problems pertaining to the chiefs of full paid departments were discussed and Clarence Goldsmith, of the National Board, attended this session in an advisory capacity.

The chiefs of the Volunteer Fire Departments met in the Convention Hall, with Chief W. J. Pflanzer, of Lebanon, as chairman. The principal item discussed was the present law pertaining to the Firemens Indemnity Fund, which pertains to

(*Continued on page* 659)



Snapped at the Ohio Chiefs' Convention

Upper, Left to Right—T. Alfred Fleming, National Board of Fire Underwriters, and the new president of the association; Chief T. S. MacFarland, Marion, Ohio. Lower, Left to Right—Chiefs Remy, of Mansfield (past-president); Moser, of Warren; MacFarland, of Marion (president); Speddy, of Lakewood, and Granger, of Cleveland

Apparatus Exhibited at the Convention of the Ohio Fire Chiefs

L. to R.—American-LaFrance, Buffalo, Peter Pirsch for New Bremen, Ohio, Boyer, American-LaFrance, Prospect for Millersburg, Ohio, 600-gallon Seagrave Special, 750-gallon Seagrave for Rittinan, Ohio.

WITH THE EDITOR

The "Safe and Sane Fourth" versus Fireworks

Chiefs throughout the country are appealing to parents and other citizens to prevent the indiscriminate use of fire crackers and other noise-producing or ornamental fireworks on the Fourth of July.

Where the law specifically forbids the sale of fireworks "boot-legging" dealers are bound to spring up, who do not hesitate to surreptitiously sell these dangerous explosives.

The plan of getting in touch direct with the parents is probably the best and most direct way of accomplishing the desired result. Not only are the parents apt to view the matter from a more dispassionate and reasonable standpoint, but when it is properly presented to them, they will realize that by refusing consent and the necessary cash to purchase fireworks to their children they are in reality protecting them against injury.

Severe penalties should be imposed upon dealers who violate the law in selling explosives to children who may have, unknown to their parents, gathered a few pennies together to purchase such. These acts are deserving of the most drastic punishment, both from the status as law violators and to deter other individuals from offering for sale forbidden fireworks.

Of course the element of fire is always present in the noisy type of Fourth of July celebration. Even at the present day, when the "Safe and Sane Fourth" is so generally observed, Independance Day is one of the busiest times of the year for the fire department. It is therefore a very good policy for the chief to take an active part in promoting a substitute type of celebration to the noisy one, and in this he can actively participate, allowing apparatus that can be spared to join in the procession as well as any of his men whom he can let off for the day. Firemen in uniform, taking part in patriotic exercises, are always an impressive sight for the youth of the community. In this way the chief and his men may serve the double part of assisting in the patriotic exercises of the day, and in furthering a more sensible and quieter method of celebrating it.

Politicians, Hands Off!

The New York Fire Department, under the administration of Chief Kenlon, is known as an organization that is free from the blight of politics. An instance of this is to be found in the office of an individual who has served notice on the politicians that he is not "approachable." He is Captain J. J. McCarthy, who, by the way, compiled and edited the department's new "Book of Rules."

Holding the position he does as head of the Division of Public Assembly, it often transpires that he sometimes runs foul of the interests of politicians and their friends. When this is the case, these individuals discover to their chagrin that neither pull nor influence avails them anything or gets them anywhere. Each case must stand or fall upon its own merits alone. If a protest is made, the captain simply smiles urbanly and points to a sign in his office, the purport of which is to be found on another page of this issue.

Such an officer as this is an invaluable asset to any chief and his department, and is a shining example for the younger officers of the service to follow. A strict enforcement of both the letter and the spirit of the law is always the wisest policy. This kind of enforcement, when it is known that the officer in charge is fearless in the discharge of his duty, without any shade of favoritism, will have a salutary influence upon the politicians. When it comes to be recognized that an officer is not "approachable," and is so well entrenched in his position that the politicians cannot "get" him, he will be let very severely alone by this particular breed, and the department will be so much the gainer.

After all, the man who has pluck enough to stand up against any and all dishonest suggestions and wrongly exercised political influence, will find that he has the solid backing not only of the head of his department, but also of the best elements of his community, who will see that the officer is given the heartiest support in any endeavor to improve the *esprit de corps* of his command and to protect it from corrupting influences.

A firm stand for the right and for the good of the service will result in the triumph of the cause, which means so much to the city and its fire department.

Uphold the Chief

It is not only the duty but it is also a policy of the utmost wisdom for the city authorities to stand behind and uphold the chief of the fire department in his various acts for the good of the service, and the discipline of the department. Only by this means can it be demonstrated both to the members and also to the general public that the chief is firmly seated in the saddle and that no "nonsense" will be tolerated.

An instance of this kind occurred recently in Minneapolis. Chief C. W. Ringer charged that "through political influence with the fire department, the firemen have been encouraged to ignore the orders of the chief," thereby interfering with the discipline of the department. This statement was challenged by one of the aldermen, who moved that the city council censure the

chief and give him a 30-day leave of absence, without pay.

The chief appeared before the aldermanic committee and said that he was still of the same opinion. He quoted a statement said to have been made by a member of the civil service commission, in which this individual had told the Fire-Fighters' Union that the civil service commission would deal directly with the firemen and not through the chief. Chief Ringer cited this as one of the factors "responsible for the general tearing down of the morale of the department."

Upon this explanation, a motion was passed by the committee that the council support the chief in any orders he may issue to enforce discipline in the fire department.

If cities would generally take this stand the result would be an increase in the general efficiency of the fire-fighting forces of the country. There can be no such efficiency without discipline. Nor can a chief enforce discipline, if he be made a creature of political party or boss or be subject to any influence outside of legitimate channels. Fortunately, the majority of city governments do stand back of their fire chiefs in this respect.

All Ready for Stover-Great Lake Special

A complete itinerary has been arranged for the chiefs who will leave Chicago for the I. A. F. C. convention at Portland by way of the "Stover Special" which, as in a number of the preceding years, has been arranged by Frank F. Stover of the Chicago office of the Gamewell Company.

Frank F. Stover

According to arrangements, four and one-half days will be spent in the Yellowstone National park, and the party will arrive in Portland on the night of August 7, in time for the trip to Mt. Hood and the Columbia river under the guidance of the local entertainment committee.

The train will leave Chicago by way of the C. B. & Q. railroad on July 31 at 10:30 a. m., and will arrive in St. Paul in the evening of that day. On August 2, breakfast will be served at the Cody Inn, and a trip made to the Sylvan Pass. Dinner will be served at the Grand Canyon Hotel, as well as breakfast the following morning. On August 3, the party will visit Old Faithful and stop at Old Faithful Inn. On the afternoon of the following day, a stop will be made at Yellowstone Lake where both dinner and breakfast will be served. On August 5, a trip will be made to the Grand Canyon, and the night will be spent in the Grand Canyon Hotel.

From Gardiner, the trip will continue by way of the Northern Pacific, and the train will arrive in Spokane, Wash., on the morning of August 7 and in Portland, Ore., on the evening of that day.

The train will include baggage car, dining car, drawing room, compartment and section sleepers. Mr. Stover asks that those intending to make the trip, notify him early so that the best equipment of the railroads could be set aside for this special train. The plans permit one day of rest in Portland before going on the Mt. Hood trip and before the crowded program of the convention. For further details of the trip, and the cost, address Frank Stover, Gamewell Company, 417 S. Dearborn St., Chicago, Ill.

Gambrell Chief of Dallas, Tex.

Roderick D. Gambrell has been appointed chief of the fire department in Dallas, Tex., to fill the vacancy caused by the resignation of Chief Tom A. Myers who was a member of the department for forty-seven years.

Chief Tom A. Myers, Retiring from the Service

The new chief was a member of the department for eighteen years, is the youngest chief in the history of the city, and is the fifth chief appointed since the city instituted a paid fire department. Mr. Gambrell has an honorable war record, and was the first one to enlist for war service from that city. He is now thirty-nine years old and advances from the position of commanding officer of Company No. 4.

Commissioner Parker gave unstinted praise to the record of the retiring chief.

He said, "Chief Myers will be retired with the grade and rank of chief of the fire department with full allowance of half pay—the first time that such an honor was paid to any one, and an honor that Chief Myers richly deserves. For forty-seven years he has served the people of Dallas in the department with that high type of courage, ability and fidelity to duty that should and will prove an inspiration to those who come after him."

The new chief will assume charge of the department on July 1.

St. Paul Firemen's Band at Convention—The firemen's band of St. Paul, Minn., attended the convention of the Minnesota Firemen's Association held in Duluth.

Snapped Here and There at the New England Convention

Capt. Robt. Black, Johnston, R. I., Pete Donnelly, and Mrs. D. C. Hill, Providence, R. I., and Chief L. Batchelder, Canterdale, R. I.

Capt. G. W. I. Stevens, Portland, and Chief F. P. Dunnigan, Westport, Conn.

Chief J. F. Donovan, Meriden, Conn., and Wm. F. Noble, New Britain, Conn.

The Bridgeport Delegation—Chief Johnson, second from left

QUESTIONS AND ANSWERS

Conducted by FRED SHEPPERD, B. Sc., M. E.

"He that questioneth much shall learn much"—BACON

NOTE—Readers of FIRE ENGINEERING are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified.

Placing a Traffic Siren

To the Editor:

Kindly tell me the correct manner in which to place a traffic siren for the location described. The fire station is on a street going north and south. This street emerges into the Boston Post Road so as not to cross the main highway directly. There is a trolley line on the Boston Post Road and the main line of traffic is in both directions on this road.

I have placed the siren on the street corner so that the siren points north and south. In this way the sound from the siren travels in an east and west direction or in the direction of the main line of traffic.

Some of the people here say that I have not set the siren properly. If I am wrong please tell me how the siren should be set.

Very truly yours,
W. A. S.

Answer: There should be no criticism of the manner in which you have placed the traffic siren. When the apparatus emerges from the house to answer an alarm, traffic going east and west will have a good view of the engines and will see the necessity for stopping, or else some sound from the siren will reach them.

On main line traffic the cars move faster, and it is sometimes more difficult for them to stop. Therefore the sound should travel a further distance in this direction. In addition, the trolleys will destroy some of the sound from the siren. Most of the accidents reported have been from fire apparatus crashing into trolley cars and vice versa. The main portion of the sound should be concentrated along the line of travel of the trolleys so that the motormen will be warned in ample time.

It is doubtful, if under the conditions that you have described, that you could mount the traffic siren in a better manner.

Specifications for New York Tank Truck

To the Editor:

I would highly appreciate your trouble if you will advise me in an early issue as to the specifications for the tank truck permitted in New York for the transportation of gasoline. I understand that such trucks are now being commonly used and I would like information on them.

Sincerely yours,
F. T. T.

Answer. The following are the Specifications for Tank Trucks to be used in the Transportation of Volatile Inflammables in Accordance with the Provisions of Section 114, Article 8, Chapter 10, of the New York Code of Ordinances.

Certificate of Approval: A Certificate of approval shall be obtained from the Fire Commissioner for each make or type of tank truck in which volatile inflammable oils are carried for delivery purposes and such certificate shall be granted only with respect to tank trucks whose reliability, safety and satisfactory performance have been demonstrated.

Truck Chassis: The chassis shall be adequate to carry the superimposed tank together with its maximum load.

Marking and Painting: Each tank truck used within the city limits shall be given a serial number and an approval number and shall be registered in the Bureau of Fire Prevention.

The name of the person, firm or corporation owning and operating the tank truck shall be painted on either side of the tank truck in letters not less than six (6) inches high, also the serial number and Certificate of Approval number in letters not less than two (2) inches high.

The words GASOLINE and DANGER shall be painted on either side and on the rear of the tank truck in letters not less than (10) inches high.

The tank body shall be painted red.

Use: Tank trucks approved for hauling volatile inflammable oils shall be used for no other purpose; and shall carry only one type of such oils at any one time.

Tank Capacity: The total carrying capacity of the tank shall not exceed fifteen hundred (1500) gallons. Additional space for expansion shall be provided in each compartment equal to at least two per cent of the capacity thereof. An adequate sealed indicator shall be provided for each compartment in the fill cap dome.

Tank Construction: The tank shall be a rigid all metal welded structures effectively braced to withstand twisting strains, elliptical in cross-section, and of not less than three-sixteenth inch steel throughout. If the total capacity of the tank shall exceed two hundred and fifty (250) gallons it shall be subdivided into two or more compartments no one of which shall exceed in capacity two hundred and fifty (250) gallons. The heads and partitions shall each be in one piece; shall extend beyond the shell and shall be connected so as to afford rigid construction. The wrapper sheet of each compartment shall be in one piece having the longitudinal seam located near the top and such sheet shall not be pierced at any point below the normal liquid level.

Each tank shall be capable of withstanding without structural injury a test of dropping while filled with water a distance of four (4) feet and landing upon its mounting on a concrete floor.

For each compartment a manhole is to be provided having a minimum width of fourteen (14) inches and having a filler cap of not less than six (6) inches diameter.

All welded joints in the tank and its connections shall have a strength in excess of the strength of the parts welded.

Each tank compartment shall be properly annealed to relieve any stresses introduced by the welding and shall be tested for strength and tightness.

The tank shall be so mounted on the chasis that it will not be subjected to twisting strains by the twisting of the chassis frame; also in such a manner as to eliminate shifting or twisting of the tank in its mountings and to eliminate friction between the tank and such mounting; and so as not to impair the flexibility of the chassis frame. No sillings and or cradles of combustible material shall be employed in supporting the tank body.

The mechanism controlling discharge from the tank shall be at the rear and shall be housed in a control box integral with the tank body.

There shall be a single delivery outlet in which shall be placed a self closing valve or a valve closing automatically when subjected to a temperature of 160 degrees Fahrenheit; such valve to operate in conjunction with an additional valve installed in such delivery assembly and opening against the flow of the liquid, and so placed that it will close automatically if a break occurs in the delivery assembly.

The discharge from the different compartments shall be carried to the control box and shall empty into the delivery outlet.

The discharge from the tank compartment shall be adequately housed within the tank (except, however, the high point of the syphon); shall be not less than two (2) inches inside diameter; shall be welded into the partitions and rear head of the tank: and shall be free from threaded joints.

The outlet from the tank compartments into such discharge shall be controlled by valves situated at the outlet proper of each compartment. Such compartment outlet valve shall be operated selectively from the control box and such control shall not permit the opening of more than one compartment at a time. Such valves shall be capable in emergency of being closed manually either from the driver's seat or from the control box.

No valve shall be capable of being opened from the driver's cab.

Method of Discharge: The compartments shall be emptied separately and discharged by means of a syphon only. The syphon action shall be established by a hand operated pump of approved design and operation or by any other approved method.

There shall be a syphon breaker in the discharge line; said breaker to be open at all times except when compartment is discharging and to be operated and controlled in conjunction with the compartment outlet valve. The discharge hose shall be at all times connected to the delivery outlet.

All valves, discharge pipes, hose lines and connections shall be absolutely tight at all times and shall permit no leakage or spill therefrom.

Protection against Fire: Except for cushions on the driver's seat and on the window and windshield frames, the entire tank truck shall be constructed of incombustible materials. At least one three-quarter (¾) gallon foam type fire extinguisher shall be located in or near the driver's cab.

The outlet of the muffler or exhaust line shall terminate under the cab or engine and such outlet shall be turned down or forward.

The gasoline tank supplying the truck motor shall be made of material which in strength and wearing qualities, is equal to screen gauge galvanized iron. Such gasoline tank shall have adequate baffle plates and a filler cap hinged to the intake pipe or otherwise secured thereto.

Such tank shall be housed under the driver's seat within the cab and shall not be filled during the loading or unloading of the truck nor while the motor is operating.

The motor ignition system shall be so arranged that the motor cannot be started except by use of an ignition switch located within the driver's cab.

The truck shall be lighted from a storage battery which shall be used for no other purpose. Each lighting circuit shall be protected by a proper fuse and it shall be carried in a flexible metal conduit which shall be securely fastened to the truck. The tail light shall be located on top and at the extreme rear of the tank.

The tank shall be permanently grounded electrically to the chassis. The tank truck shall be electrically grounded before the tank filling operation is commenced and such grounding shall not be disconnected until this operation is completed. During the unloading operation a metal-lined flexible hose of approved make shall be used between the delivery outlet and the fill box. Such hose shall have a bronze or brass connection metallically and firmly grounded to the metal lining and shall be firmly connected to the fill box at all times during unloading.

A 40 x 40 mesh non-corrodable wire screen shall be installed under each filler cap. Such screen shall be adequately protected against injury and shall be so installed as to permit ready inspection.

Each tank compartment shall be provided with a breather vent of not less than ¾ inch diameter. Such vent shall be protected by a 40 x 40 mesh non-corrodable wire screen installed so as to permit ready inspection. In addition a ¾ inch vent opening in each compartment shall be provided, normally closed by a plug fusing at 160 degrees Fahrenheit. Such latter vent shall be protected by a similar screen and shall be so designed and installed as to insure positive operation. The mechanical parts of all vents shall be made of non-corrodable metal.

The syphon breaker opening shall be protected with a 40 x 40 mesh non-corrodable wire screen.

The control box door shall be fitted with heat responsive elements so that it will automatically close when subjected to a temperature of 160 degrees Fahrenheit.

Protection against Collision: The delivery outlet assembly shall be provided with a breakpoint at which the construction is weakened so that the break if any, in the event of a collision will occur at the point so determined.

Fixed substantial steel bumpers shall be provided at the front and rear of the vehicle adequate to protect the discharge equipment. The material used shall be of dimension and strength equal to six (6) inch structural steel channel weighing 10½ pounds per foot.

Protection against Carelessness: The propelling motor of the tank truck shall be stopped during loading and discharging.

The mechanism located in the control box at the rear of the truck shall be inaccessible while the propelling motor of the truck is in operation. Provision shall be made to require the stopping of the motor before the control box door can be opened and to require the closing of the control box door before starting the motor.

Driver's Cab, Side Racks, Running Boards, Etc.: Side racks, and buckets are prohibited. All steel running boards shall be provided and shall exceed the maximum width of the chassis at least three (3) inches on either side. The over-all width of the assembled truck shall not exceed ninety-six (96) inches. The front mud guard shall be carried to the maximum width established by the running board.

The driver's cab shall be provided with sliding half doors, arm high and with sliding folding windows without curtains.

An adequate windshield shall be provided in front of the driver's cab.

Dynamite and Hose Layouts

To the Editor:

It would be very much appreciated if you would answer the following questions. We have not happened to run across this information in any of the past copies of your journal, although you have undoubtedly taken these matters up before.

Question 1. Will dynamite, 70%, explode or burn, when exposed to fire?

Question 2. If dynamite caps, say 1,000, are stored in the same building, within 50 feet of ten cases of 70% dynamite, is there danger of explosion in case of a fire?

Question 3. Is there any material advantage in laying one line of 3-inch cotton rubber lined hose and one line of 2½-inch cotton lined hose 200 feet long, over two 2½-inch cotton rubber lined hose lines, the same distance? If so, what?

These are questions that were brought up among the boys at the last meeting and we would appreciate the information.

Yours truly,

W. R. D.

Answer 1. Dynamite is always dangerous although a lot can sometimes be done with it without an explosion resulting. Ordinarily dynamite will burn very much like grease when exposed to fire. Unless in a partly frozen condition there is comparatively little danger of the dynamite exploding when exposed to fire only. It is, however, a safe precaution never to assume that dynamite is harmless under any condition but to always treat it cautiously, bearing in mind the potential possibilities.

In a vast majority of cases dynamite if exposed to fire would burn without detonating.

Answer 2. Having dynamite caps and dynamite in the same building would represent a very severe hazard in case of fire. Dynamite caps are detonated and the percussion which 1,000 of them would create upon exploding might be sufficient to set off the dynamite. In fact, if they are placed in close proximity to each other the likelihood of the explosion of the dynamite would be pronounced. Dynamite is exploded by percussion, which the caps upon exploding might provide in sufficient strength.

Answer 3. It is assumed that you have reference to laying lines of hose into a deluge set or into a siamese. In this case the layout consisting of one 3-inch line and one 2½-inch line would have approximately 59% of the friction loss that you would get in two 2½-inch lines of the same length, the flow remaining constant. For instance, if the friction loss in the two parallel 200 foot lines of 2½-inch hose amounted to 20 pounds, then the friction loss in a layout the same length consisting of one 3-inch line and one 2½-inch line would total only 11.8 pounds.

Draughting Ability of Pump

To the Editor:

Will you please state in your columns the exact difference in draughting, if there is such in a centrifugal and piston pump at sea level?

Respectfully, yours,

C. L.,
Long Beach, Calif.

Answer. It is assumed that you have reference to fire engine pumps such as are found in service, and it is on this assumption that the following data is given.

Centrifugal pumps do not depend upon the creation of a vacuum by the centrifugal pump itself when draughting water, but instead use a small priming pump which, by creating a partial vacuum, causes the water to rise to the level of the main pump where it is taken in tow and discharged under pressure. Once the centrifugal pump chamber is filled with water, the water acts as a seal, making it possible for the main pump to continue to draught water.

As to the difference in draughting ability, under the above conditions, of the centrifugal and piston pumps, it may be said that the difference is negligible. This is particularly so when both the priming pump on the centrifugal and the rotary pump are in good condition and tight fitting. Bear in mind that the above in a reality compares different types of rotary pumps, for the centrifugal pump alone without the priming pump does not have the ability in itself to create a vacuum or lift water.

Chief Hurt in Covington, Ky., Fire

Acting Chief John Schroeder of Covington, Ky., was injured by cuts on his left hand while fighting a fire in a planing mill. It was necessary to call aid from both Cincinnati and Newport before the flames were under control. It is believed that the fire started from spontaneous combustion.

Fire Chiefs to Tour Oregon—Chief Roy Elliot of Portland, Ore., president of the Oregon Fire Chiefs' Association, Chief Thomas Graham of Corvallis and Claire Lee, state fire marshal, will make a tour of the state in order to promote greater efficiency in the fire departments. The plan is being sponsored by the office of the state fire marshal.

OLD MONTREAL CUSTOMS HOUSE DESTROYED BY STUBBORN FIRE

Damage Estimated at $200,000—Large Amount of American Express Packages Burned—Section of Roof Caves in

SIX firemen were scorched and overcome by smoke in a fire that destroyed the upper floors of the Customs Express department in the old Examination Warehouse at the foot of McGill street, Montreal, Canada. Only the thick stone walls of the old building prevented the fire from eating its way through to the Harbor Commission offices adjacent.

Chief R. Gauthier

Three alarms were sent in at intervals of ten minutes. The fire occurred at the time when many office employees were returning from their lunch hour, and it was not long before the section was jammed with curiosity seekers. A heavy pall of smoke hung over the harbor and attracted more of a crowd.

Twenty minutes after the fire was at first discovered by an elevator operator, a section of the roof fell in and myriads of sparks flew upward. Three firemen who were carrying up a line of hose to the third floor, were scorched when a back draft swept down the stairway. The men were removed to the hospitals for treatment.

Firemen tried to confine the flames to the original building, when for a moment, it appeared that it would spread to the upper floors of the building occupied by the Harbor Commission. Ladders were run up on all four sides of the custom building and high pressure streams played on the flames.

Two pumpers were stationed at the banks of the canal at the foot of McGill street, and lines covered the operation of the salvage corps. Other pumpers obtained their water from nearby hydrants. While the fire was in progress Captain John Taylor entered with his men and spread covers on the merchandise stored there. By this means, a large part of the merchandise awaiting shipment was saved from considerable water damage.

The top of the building where most of the damage was done was used to store unclaimed express packages. The Canadian National Express and the Canadian Pacific Express Company each had losses that totalled $25,000. The American Railway express Company estimated their loss at $95,000.

The structure was erected in 1878 of stone and brick construction. The walls are a foot and a half thick, and the floors made of brick are two feet thick.

This is the second fire that has occurred in this building, the other one having occurred in 1907.

Chief Gauthier and District Chiefs Carson and Marin were in charge of the men at the fire.

Monoxide Fumes Overcome Firemen

Thirty firemen were overcome, and three injured at a fire in the plant of the Hartford Charcoal Company on May 24. The fire originated from an undetermined cause in thousands of bags of charcoal stored in the two story corrugated iron building, and it was while overhauling these bags that many of the men were overcome. The charcoal, burning in a limited supply of air, gave off quantities of carbon monoxide gas, which, being very poisonous, seriously affected the firemen. The prone pressure method of artificial respiration was applied to the victims, and eighteen were removed to hospitals, the rest being able to remain on duty.

The alarm was received shortly before six p. m., so that both platoons were on duty at the fire, thus obviating the need of additional alarms. The property loss was comparatively small, being estimated at less than $2,000. Chief John C. Moran, and Deputy Chiefs John E. Carey and William H. Daley were in command at the fire which lasted about three and a half hours. This was the third fire at the plant within a short time, and on recommendation of Chief Moran, different arrangements will be made for storing the product.

ROBERT WILEY.

EXPLOSION IN FILM CUTTING PLANT SPREADS FIRE TO THREE HOUSES

Men Seen to Fall Back in Burning Building—Twelve Towns Called to Give Aid —Five Men at Work in Cutting Plant

UNCONFIRMED reports state that four men were killed, at an explosion which occurred in the film cutting and washing plant of the Plasteroid Company in Ridgefield, N. J. However, the explosion which started, it is believed, from static generated at a washing machine, caused the fire to spread to three nearby buildings.

The blast occurred during the noon hour, and spectators saw pieces of burning film go soaring through the windows of the plant, and two men fell back into the burning building.

The factory was used to cut and wash motion picture film and at the time of the accident five people were employed there.

The Remains After an Explosion in a Film Cutting Plant in Ridgefield, N. J.

Telephone service was disrupted, and only meagre reports of the fire spread to the nearby towns.

Apparatus from twelve nearby companies responded to aid in fighting the fire which was declared to be under control after a two-hour fight.

Two houses near the plant were completely wrecked by the explosion. The total damage is estimated at $150,000.

Appeal for Safe and Sane Fourth

John Dorman, fire commissioner of New York city, has appealed to the parents to aid in maintaining a "safe and sane" Fourth of July by refusing children money with which to purchase fireworks.

He said that inspectors of the department discovered that fireworks were being stored illegally in the basement of homes containing several families, and that during the past few weeks, several thousand dollars worth of fireworks have been confiscated. One man was arraigned for storing a stock of $4,000 in the basement of his home.

Last year, Mr. Dorman pointed out, eighty children were seriously injured in the city by fireworks. He urged school teachers and others connected with children to impress on the youngsters the danger of playing with such explosives.

New Fire Station Opened in Ridgefield, N. J.—Hose Company No. 2 of Ridgefield, N. J., opened its new fire station. During the entire evening, refreshments and a buffet supper were served, and then there was dancing.

Bridgeport Enlarges Fire Alarm System—In order to keep up with the rapid growth of the outlying sections of Bridgeport, Conn., the Board of Fire Commissioners have awarded the Gamewell Company a contract to install an additional ten-circuit board to the manual system, and ten fire alarm boxes. Frank M. Tiffany, a Gamewell representative, secured the order.

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands.

Week Ending June 18

SALUDA, S. C.—Bldg. of Wheeler Motor Co..... 30
CALGARY, ALTA.—Premises of D. H. Bain Co. damaged.... 30
OUTREMONT, QUE.—Montclare Apartments destroyed..... 80
ROSEMONT, QUE.—Bldgs. of Maisonneuve Quarry Co..... 250
JACKSONVILLE, FLA.—American Fibre Co. damaged..... 25
NEWNAM, GA.—W. F. Asher Lumber Mill..... 40
ROCK ISLAND, IA.—Interior of Eli Mosenfelder Bldg..... 100
ST. PAUL, MINN.—Calhon Wall Paper & Paint Co..... 25
WILMONT, N. H.—M. R. Grace store and adj. property..... 30
PERTH AMBOY, N. J.—Plant of Perth Amboy Shipbuilding & Dry Dock Co..... 400
EFFINGHAM, ILL.—Illinois College of Photo Engraving..... 25
PEMBROKE, ONT.—Pembroke Lumber Yards..... 250
BALDWIN, L. I., N. Y.—Residence of Frank Tinney..... 50
WILMONT, ARK.—Four dwellings in business district..... 60
SOUTH HELENA, ARK.—Bandmill of Penrod-Jurden Co..... 25
KEWANEE, ILL.—Foundry of Kewanee Boiler Co..... 25
READING, MISS.—Main bldg. of Wakefield Rifle Range..... 30
OLCOTT, N. Y.—Summer Hotels and cottages damaged..... 70
BLACKSTONE, MASS.—Waterford Free Baptist Church..... 65
LAKELAND, FLA.—Lakeland High School damaged..... 80
HORNELL, N. Y.—Receiving plant of June Creamery, Inc.... 25
SUNNYSIDE, WASH.—Business establishments damaged..... 40
LEON, KANS.—School Bldg. damaged..... 40
FRESNO, CALIF.—Fresno County Shops near Fair Grounds... 80
FRAMINGHAM, MASS.—Icehouse of Saxonville Ice Co..... 25
ELMIRA, N. Y.—Penna. R. R. Shops damaged..... 40
NORTH NASHVILLE, TENN.—Unit of Mammoth Warehouse destroyed..... 40
DINUBA, CALIF.—Business buildings destroyed..... 25
NEWELL, GA.—Turpentine still of J. C. Littlefield..... 25
RIDGEFIELD, N. J.—Film plant and adj. property..... 150
TIMMINS, ONT.—Reed block in business district..... 125
HENDERSON, KY.—Tipple of Southland Coal Co. Mine 2..... 30
JOPLIN, MO.—Warehouse of S. W. Bell Telephone Co..... 50
GALION, O.—Plant of Gallon Metallic Vault Co..... 250
OKMULGEE, OKLA.—Property of Empire Refining Co. damaged 40
GREENWICH, CONN.—Residence of Mrs. Imre de Josika Herczeg..... 40
CINCINNATI, O.—Warehouse of Cook & Varnish Co..... 200
SANTA MONICA, CALIF.—Power boat "Fashion"..... 40
DUNMORE, PA.—Two bldgs. destroyed, several damaged..... 30
BUTTE, MONT.—Ryan Fruit Company warehouse..... 50
KANSAS CITY, MO.—Bldg. of California Produce Co..... 25
MURRAY, NEBR.—Business establishments destroyed..... 30
SHAKOPEE, MINN.—Plant of King Midas Mill Co..... 50
KINGSTON, N. J.—City hall damaged..... 175
HOUSTON, TEX.—Gas well of Rio Bravo Oil Co., Pierce Junction..... 80
LEBANON, OHIO.—Factory of Eco-Thermal Stove Co..... 170
MACATAWA PARK, MICH.—37 cottages destroyed..... 170
PALISADE, NEV.—Property of Eureka-Nevada R. R..... 50
PROVIDENCE, R. I.—Salesrooms of Oliver Johnson & Co..... 80
BROWNSVILLE, PA.—Plant of Brownsville Telegraph..... 125
JERSEY CITY, N. J.—Fourth Regiment Armory destroyed.... 800
HICKORY, MISS.—Mill of O. S. Hopkins Lumber Co..... 25
NASHVILLE, TENN.—Bldg. of E. B. Hart Tobacco Co..... 40
TORONTO, ONT.—Bldg. at 117 W. King St. damaged..... 35
FENVILLE, MICH.—Pearl Creamery, 3 mi. south..... 25
CHICAGO, ILL.—Property, 2700 block, W. Madison St..... 40
FORT MILLER, N. Y.—Mill of Ft. Miller Pulp & Paper Co... 80
MONTREAL, QUE.—Factory of McArthur, Irwin, Ltd..... 200
PITTSBURGH, PA.—City building occupied by electrical dept.. 25
MADISON, WIS.—Business buildings Capitol Square..... 165
TEXARKANA, ARK.-TEX.—Michael Meagher Hospital..... 65
BROOKFIELD, MO.—McNamara Warehouse destroyed..... 25
KANSAS CITY, MO.—Warehouse of Cook Paint & Varnish Co.. 225
CHICAGO, ILL.—Nos. 2736-48 West Madison Street..... 100
BOSTON, MASS.—Bldg. occupied by Pullman Co..... 25
INDIANAPOLIS, IND.—St. Patrick's Catholic Church destroyed 80
LAKEVILLE, MINN.—Creamery of Lakeville Creamery Co..... 50
GRIMSBY, ONT.—Store of Thorpe Bros. and adj. property.... 50
MILWAUKEE, WIS.—Shipping-room of Geuder-Paeschke, Frey Co. 30
GARFIELD, N. J.—High School destroyed..... 170
CHICAGO, ILL.—Westward Ho Country Club damaged..... 80

Canada Has Municipal Book

Very complete information on Canada has been compiled by H. Wisely Bragg and published in the Canadian Municipal Directory for 1927. The book is divided into three main divisions.

The first part lists alphabetically, the cities, towns villages and rural communities as well as counties, and has the names of the mayors, commissioners, engineers and other city officials.

In the second section of the book are a number of authentic articles of interest to municipal officials including the article prepared for the National Fire Protection Association on the Shingle Roof Hazard.

The official buyers guide for municipalities and contractors constitute the last section of the book. This book should prove of value to firms doing business in Canada and to those who want a complete tabulation of Canadian municipal information.

Decision of Chief Ringer Upheld

Members of the fire committee who were empowered to conduct an investigation in the charges made by an alderman against Chief C. W. Ringer of Minneapolis, Minn., upheld the statements made by the chief and thereby ended the charge of the alderman that Chief Ringer should be suspended for a thirty-day period.

Chief C. W. Ringer

The official objected to a statement made by Chief Ringer that "through political influence with the fire department, the firemen have been encouraged to ignore orders from the chief." During the investigation, the chief indicated to the committee that he is still of the same opinion, although it was impossible to directly lay this as the cause of the death of two firemen as the result of an accident.

The chief charged that a prominent member of the civil service commission told members of the Firefighters' Union that the civil service commission would deal directly with the firemen and not through the chief.

Another alderman questioned the advisability of the chief to hold exhibition fire runs, especially so since one fireman was seriously hurt during such a run. Chief Ringer said that he believed it to be advisable to demonstrate the manner in which the apparatus could respond to a fire, and if he thought that exhibition runs would be useful, he would not hesitate to continue them.

A motion was finally passed that the council would support the chief in any order that he may issue to enforce discipline.

Chicago Salvage to Have Own Quarters

Construction has started on a building which will house Patrols Nos. 1 and 2 of the Chicago Salvage Corps. The building will embody the latest in fire-house construction and follows closely the design of the building that was erected last year.

The first floor of the building is given over to the apparatus of the patrols and there will be a large room fitted up for the drying of salvage covers. This floor will also have the signal apparatus of the patrols of the city which is connected with the general fire alarm system of Chicago.

Dormitories and quarters for the men will be on the second floor, and in addition there will be a lounging room for the officers and the men, washrooms, showers and so forth. Chief Frank C. McAuliffe will have his quarters on this floor, and the administration offices of the patrol will be located here.

Chief Akin Speaks at Rotary Club—Chief J. L. Akin of Birmingham, Ala., spoke at the "Firemen's Day" meeting of the Rotary Club at the Tutwiller Hotel.

Lexington, Ky., Receives Pumper—An Ahrens-Fox pumper has been delivered to Lexington, Ky., and will replace a pumper that has been in service for fifteen years. The engine has a 1,000-gallon pump.

Ogden, Utah, Seeks Station Site—A site is being selected on which to erect a new fire station in Ogden, Utah. It is intended to take a small portion of the ground that is now used by a school in the city.

Bellevue, Mich., Receives New Apparatus—The Boyer fire apparatus has been delivered to Bellevue, Mich. One-half of the purchase price will be paid by the town and the balance by the farmers in the section. Each farmer contributed $25 and has the privilege of receiving fire protection service.

Chief Jerry Falvey Praised for Work—Chief Jerry Falvey of the Fourth Battalion, Chicago, has received a large amount of praise from the merchants of that section for his work in reducing the number of fires in his district. Since he started his campaign, only fifty-two calls were answered since last May—the smallest number since the company was organized.

Bookings of "The Fire Brigade" Increase

Additional bookings of "The Fire Brigade," the motion picture sponsored by the International Association of Fire Chiefs, are being received daily. The following list contains the additional bookings that have been received since the publication of the lists in the previous issues of FIRE ENGINEERING.

Due to the large number of bookings that are being received for "The Fire Brigade," space does not permit a listing of all the theatres that have booked the motion picture. Instead a listing will be made of the first date at which "The Fire Brigade" is to be shown in a municipality.

City	Theatre	Date
Arkansas		
Corning	Starlight	November 3–4
Jonesboro	New	August 17–18
North Little Rock	Princess	July 26–27
Smackover	Palace	September 1–2
California		
Angels Camp	Mother Lode	July 24–25
Bolinas	Bolinas Club	July 12
Ferndale	State	September 11
Gridley	Finks	July 31
Hayward	Hayward	August 3–4
Hollister	Opal	July 21–22
Menlo Park	New Menlo	July 13–14
Merced	Merced	July 25–26
Monterey	Golden State	July 18–19
Orland	Orland	August 30–31
Ukiah	State	July 14–15
Visalia	Visalia	July 14–15
Delaware		
Georgetown	Ryon	August 22–23
Maine		
Bridgton	Riverside	July 6
Camden	Comique	October 12–13
Caribou	Powers	July 19
Deering	Cameo	September 9–10
Freeport	Nordica	August 26
Gorham	Bickford	August 25
Machias	Colonial	July 6–7 changed from July 7–8
Presque Isle	Opera House	July 20
South Portland	Strand	August 27
Maryland		
Aberdeen	Aaco	October 21
Rising Sun	Opera House	September 2–3
Massachusetts		
Buzzards Bay	Capitol	July 22–23 *
Foxboro	Orpheum	July 8–9
Millville	Foresters' Hall	June 30
Watertown	Strand	July 13–14 changed from July 22–23
Wellesley Hills	Community Play House	June 29–30 changed from July 13–14
Minnesota		
St. Paul	Grand	July 19–20
Mississippi		
Indianola	Regent	July 14–15
Nettleton	Nettleton	July 5
Nebraska		
Lexington	Majestic	September 7–8
Lyons	Plaza	July 26–28
New Hampshire		
Bethlehem	Colonial	September 9 changed from October 8
Lancaster	Opera House	August 22
North Woodstock	Corliss	June 30
Penacook	Palace	July 7–8
Suncook	Opera House	August 28
New Jersey		
Cape May	Cox	July 8–9
Mt. Holly	Opera House	July 4–5
Paterson	Rialto	July 10–11
Pleasantville	Rialto	July 18–19
New York		
Amityville, L. I.	Star	July 10–11
Chautauqua	Commercial	July 22–23
Farmingdale	Strand	July 15–16
Phoenix	Strand	September 22–23
Pulaski	Temple	September 10
South Dayton	Dewtell	July 8–9
Ohio		
Alliance	Star	July 1–2
North Baltimore	Crown	July 10–11
North Canton	Y. M. C. A.	October 14–15
Yorkville	Yorkville	July 5
Oklahoma		
Coalgate	Wigwam	August 18–19
Covington	American	August 19–20
Sentinel	Pastime	September 4–5
Oregon		
Kelso	Auditorium	July 17–19
Longview	Columbia	July 4–5
Multnomah	Capitol	July 10–12
Newport	Liberty	September 4–5
Oregon City	Liberty	August 18–20
Stevenson	Wigwam	August 26–27
Vancouver	U. S. A.	July 23–26
Pennsylvania		
Chester	Washington	August 4–5
Forest City	Family	September 22–23
Jersey Shore	Victoria	October 12–13
Marcus Hook	Spielmont	August 15–16
Northumberland	Savoy	October 12–13
Robesonia	Pioneer	July 23
Selinsgrove	Stanley	October 3
South Carolina		
Lancaster	Imperial	July 28–29
Tennessee		
Lexington	Princess	August 31–Sept. 1 changed from July 13
Whiteville	Hi School	Sept. 16 changed from July 8
Texas		
Palestine	Queen	July 8–9
Vermont		
Hardwick	Idlehour	September 8–9
Jeffersonville	Town Hall	August 9–10
Stowe	Auditorium	August 15
Virginia		
Waynesboro	Wayne	August 11–12
Wisconsin		
Crystal Falls	Ejay	July 25–26
Kill	Pastime	July 11–12

Chair Factory Destroyed in Sterling

Fire, which presumably started from a spraying outfit used to finish chairs, destroyed the E. R. Buck Chair Shop at Sterling, Mass., the main industry of the town. While a workman was busy at his duties, a flash of flame broke over his head, and instantly, the entire room was involved.

The Sterling department responded but before water could be played on the fire, the entire front of the building was in flames. Chief Buck sent in a call for aid from Clinton, Leominster, Lancaster and Princeton. Clinton was the first of the outside companies to arrive. A fireman on the Leominster truck was injured when, in responding to the fire, the apparatus was sideswiped by a truck.

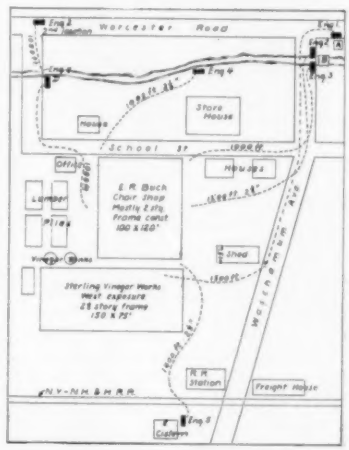


Diagram of the Sterling, Mass., Fire Showing the Manner in Which Hose Lines and Apparatus Was Placed

Sterling depended on water protection from wells and a few cisterns. Clinton did some commendable work in preventing the fire from reaching the Sterling Vinegar Works, and when water was finally available for fire streams, the west side of the vinegar works was just commencing to scorch.

The chair shop was constructed of wood and was filled with kiln dried stock lumber for making chairs. Several of the adjacent buildings were on fire at various times, but the places were saved with slight damage.

Six fire lines were used for three hours. The chief was also the owner of the shop, and one who witnessed the fire stated the chief deserves credit for the manner in which he fought the blaze. The men were hampered by a stiff breeze which carried embers to nearby buildings.

The plant boiler blew up during the fire but no great damage resulted. There were five pumpers and three hose units in service.

At two o'clock the fire which started at 10:30, was under control. The damage was estimated at $65,000, but the fire meant a loss of livelihood to many in the town.

A. B. WHITE.

Jay Stevens Speaks in Salinas, Cal.—Jay W. Stevens, state fire marshal of California, spoke at a meeting of the Kiwanis Club in Salinas, Cal. He told of the nation-wide campaign that is being conducted to lower the fire losses of the country.

DETROIT FIRE FAN PRESENTS CITY WITH AMBULANCE AND COMMISSARY

Gift Made in Memory of Mother of Paxton Mendelssohn—Will Pay Upkeep for Necessary Food and Supplies for Ambulance

By WM. JEROME DALY

A FULLY equipped ambulance and commissary, exclusively for fire department uses, was presented to the Detroit, Mich., department on Tuesday, June 7th, by Mr. Paxton Mendelssohn, a Detroiter and one of the foremost fire fans of that city.

Paxton Mendelssohn

The ambulance, second of kind in the fire service in this country, the first having been presented to the New York Fire Department over four years ago, is a memorial to Mrs. Lydia Mendelssohn, mother of the donor, who in her lifetime was actively engaged in charitable and philanthropic work in Detroit and was noted for her many benefactions toward the poor, the sick and the crippled.

The ambulance was presented with appropriate ceremony in front of the quarters of Engine Co. 17 in the presence of the fire commissioners, the chief and assistant chief of the department, scores of firemen, fire fans and numerous of the city's officials, including John Lodge, chairman of the Common Council of Detroit, and Acting Mayor of the City in the absence of Mayor John W. Smith. Mr. Lodge is the grand-uncle of Col. Charles A. Lindbergh, the aviator who flew to Paris from New York.

The ambulance was located at another fire engine house nearby and when Chief Stephen De May summoned it by telephone, it responded under an escort consisting of two motorcycle policemen and a private car containing Mr. Mendelssohn, his wife and their two sons Paxton Jr. and Louis.

The bus pulled up on the spacious ramp in front of the quarters of Engine 17, where the members of three fire companies stood at attention. In front of them stood the Fire Commission, Messrs Murphy, Clippert, Schaantz and Trendle. Then Mr. Mendelssohn in a brief address, fervently turned over to Mr. Murphy, as president of the Fire Board, a deed of gift, legally executed and containing the grant outright. It provides that Mr. Mendelssohn shall have the right to supply and maintain the equipment and the commissary from year to year. In turning over the ambulance, Mr. Mendelssohn paid tribute to his mother's memory and told briefly how she was happiest when she was doing something for somebody else. Mr. Murphy, in a few well chosen words, accepted the gift for the Department and Acting Mayor Lodge in accepting it for the City of Detroit, said in part "I have never before participated in a more touching ceremony."

The ambulance was then formally committed to the care of the chief of department. Chief DeMay extolled the services of Mr. Mendelssohn to the firemen of Detroit and then he in turn passed the ambulance on to Dr. Glenn W. Stockwell with instructions. The ambulance was thereupon placed into active service. After being inspected by numerous persons, it was backed in on the floor of the quarters.

The ambulance was built on a Packard chassis and weighs 5,300 pounds. It is 18 ft. x 4 ft. 2-inches x 5 ft. 3-inches high, with capacity for three stretcher patients. The interior is painted ivory color and in most respects is similar to the New York Fire Department ambulance, excepting that it has the combination features of ambulance and commissary for the dispensing of coffee and food. It it equipped medically from the "A" in adhesive tape to the "Z" in zinc stearate.

It is assigned to respond on second or greater alarms and to such special calls as the proper authority directs. The ambulance as far as medications and professional equipment go, is under the supervision of three physicians of the Detroit Department, Drs. Stockwell, McMahon and Schulte.

While it is a Packard product mechanically, the bus from the chassis up represents a combination of the minds of Mr. Mendelssohn, the Detroit fire surgeons and Chief Edward Rumsey of the Detroit Fire Department in charge of apparatus and shops.

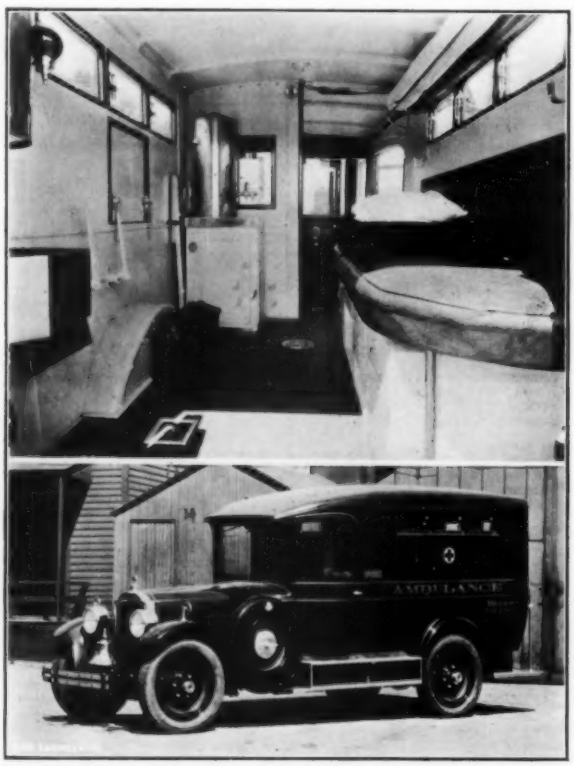
The panel on the left side of the ambulance has an adjustable window to be used as a slab or counter for serving coffee and food. Mr. Mendelssohn has arranged with the firm of Walker Bros., a Detroit chain restaurant to supply the ambulance with one hundred cups of coffee (five gallons) and such sandwiches, doughnuts, "hot dogs" or "what have you," as ordered at any time of the day or night in such short notice as a telephone call to any one of fourteen restaurants in the Walker chain. The firemen driving the ambulance will give his name and badge number to the restaurant manager and sign a slip of delivery. The five gallon coffee urn is kept hot by sterno heat.

Each ambulance driver (there are three of whom one is a relief man) has a list of the Walker Bros. stores and telephone numbers. The drivers in addition to being expert motor drivers, are now quite proficient in first aid work, especially resuscitation methods.

It was the writer's happy privilege to be invited to Detroit to observe the presentation ceremonies and while there I heard only the most glorious praise of the gift. The firemen particularly felt and expressed to me a sense of gratitude to Mr. Mendelssohn for his interest in their welfare, comfort and health.

Commissioner Murphy was especially profuse in his praise. The gift, as far as I could ascertain, was the first major benefaction by a single donor. On all sides one could hear only the most grateful expressions, for in Paxton Mendelssohn the firemen of Detroit have a friend and benefactor. He is president of the "Box 12 Associates" the fire fans club of Detroit, whose burlesque slogan is "Bigger and Better Fires for Detroit."

A week elapsed before the ambulance had its first case. Strangely enough, the first patient was a fireman in the very engine house where the ambulance is stationed. He is Special Call Fireman Frank Milton of H. & L. Co. 7, which is located under the same roof with Engine Co. 17. Fireman Milton was one of those who on June 7 participated in the inaugural ceremonies at those quarters. He was stricken with acute pneumonia on June 15 in quarters and was rushed to a hospital instantly.



Interior and Exterior View of Ambulance Presented to Detroit by Fire Fan in Memory of His Mother

Mr. Mendelssohn happened to be at the fire station at the time and thereby had his first opportunity of acting as the "first orderly" on the bus, riding with the patient to the hospital.

OF INTEREST TO VOLUNTEER FIRE DEPARTMENTS

Niagara Falls Waiting for Firemen

The Firemen's Association of the State of New York and the Western New York Volunteer Firemen's Association will meet in a joint convention at Niagara Falls, N. Y., on August 16-19. The city, which has had the privilege of entertaining many conventions, is waiting to welcome the visiting firemen.

Nowhere in America, or anywhere, are so many scenic wonders grouped together as they are in Niagara Falls. The mighty, roaring, thundering Cataract, the world's eighth wonder, has defied poet and artist alike for years. No pen can adequately describe the first impression of the Thunderer of the Waters; no brush can paint the beautiful coloring when Old Sol plays upon the tumbling, rumbling, rushing river as it leaps defiantly over the brink for a drop of 167 feet to the gorge below.

The American Fall constitutes only a part of Niagara's many scenic wonders; two other cataracts send forth their own individual appeal. Dainty Bridal Veil, located between the American Fall and the Horseshoe Falls, carries the romantic charm of a shimmering, lacy sheen. The great Horseshoe Falls stretching out in a huge half-circle and bridging the gap between the two great nations of America, is a symbol of the proud and glorious strength that has raised America to its present place as the leader of the world.

A score of other alluring beauty spots of Nature call the visitor. The ten acres of beautiful Prospect Park parallel the chasm of the river and the Upper Rapids; separating the mighty Falls is Goat Island, famed in Indian legend as the home of the Great Spirit; beneath charming Bridal Veil is the Cave of the Winds and then there is Table Rock Tunnel where the waters of the Cataract rush over the visitor's head with a terrifying, yet fascinating roar.

Aside from the wondrous beauty of the scene, the engineering feat which made possible this glorious pageant of colors is one of the greatest in the history of mankind. Early in 1925, the present illumination project was developed and installed under the direction of W. D'Arcy Ryan, director of the illumination laboratory of the General Electric Company. The complete battery casts 1,440,000,000 candlepower of light upon the falls. Ten different color screens are provided for each lamp, and unique roller color screens are attached to each lamp making possible the most wonderful blending and fading of colors ever witnessed.

This marvelous scene, appealing alike to the scientist and the artist, may be witnessed every evening during the winter months from 7:45 to 10:15 and during the summer from 9:30 to 11:30.

Wessberg President of Minnesota Firemen

Chief G. A. Wessberg of Fergus Falls, Minn., was elected president of the Minnesota Firemens' Association at the convention held in Duluth. The convention next year will be held in Fergus Falls following out the custom of the association of meeting in the town from which the president hails.

Since the death of Chief Randall, Chief Wessberg, first vice-president, served as head of the association. A resolution of condolence was adopted over the death of Chief Randall of Duluth who was a member of this group for more than thirty years and exercises were held at his grave.

The delegates and the ladies enjoyed a trip on the St. Louis river and witnessed a demonstration of the fire tug McGonagie. The convention ended with a banquet at the Shrine auditorium at which more than 1,500 attended. The firemen's saxaphone band and quartet from Duluth furnished music during the dinner.

Chief S. H. Hansen of Duluth was convention chairman since the death of Mr. Randall, and presided at the gathering.

Maryland Firemen Have Meeting

Members of the Maryland State Firemen's Association brought their annual convention in Annapolis, Md., to a close on June 10. Those who attended did not hesitate to say that the convention this year was the best in the history of the association.

During the parade, one of the members who was riding on the rear of a piece of apparatus, died from what is attributed to heart disease.

Visiting firemen had an opportunity to fight a fire which occurred in a row of six wooden garages during the convention. All of the buildings with two automobiles were destroyed.

The following are the newly elected officers: president, B. H. Ford, Crisfield; senior vice-president, Henry Hideman of the Veteran Firemen's Association, Baltimore; first vice-president, Francis H. Crown, Mount Rainier; second vice-president, H. A. Myers, Manchester; secretary George R. Lindsey, Hagerstown; treasurer, Franc C. Ort, Midland; member of the board of trustees, William H. Collier, Salisbury.

Next year the association will meet in Elkton on the second Wednesday in June. Both Frostburg and Ocean City put in a bid for the convention but it was given to Elkton as that city never had the opportunity of entertaining the association.

Butcher-Fireman Arrested for Arson

A resident of Perth Amboy, N. J., a butcher by day and a volunteer fireman when the occasion occurred, was arrested for setting fire to a garage.

He was arrested as he was playing a hose stream on the garage fire. A milkman saw the butcher leave the garage just as the fire had started. The police were notified and the arrest of the butcher followed. Two automobiles were destroyed in the fire that razed the building.

Pump for Flooded Manholes

In line with the number of articles that have been printed in this magazine telling of how water may be pumped through long suction lines, the device illustrated might be of interest.

Vevac Pump

It is a bronze casting with no valves or moving parts. The intake end is connected to a hose leading from a hydrant and a short length of hose connects the discharge end to the gutter or point where the water will discharge. The pump is lowered into the catch basin and the water from the hydrant is turned on. The pump is known as the "Vevac," and the principle involved is similar to the arrangements described in the other articles.

In another part of this issue, there is a description of a device that has been designed by Sam Faulkner, master mechanic of Omaha, Neb. A device of this character is of value in removing water from cellars after a very heavy rain, and perhaps for salvage work of this character.

Fire Department Reports Received

Lowell, Mass.—Annual report of the chief engineer; thirty-four pages and cover.

Fire Department, Columbia, S. C.—Annual report of the chief of the fire department; 102 pages and cover.

Fire Department, Los Angeles, Cal.—Fortieth annual report of the fire department; fifty-six pages with tables and cover.

South Dakota, State Fire Marshal—Nineteenth annual report of the state fire marshal; twenty pages and cover with many tables.

Bureau of Safety, Panama—Report of the Bureau of Safety printed both in English and in Spanish; fifty-three pages with tables and cover.

Vermont State Firemen's Association—Proceedings of the thirty-seventh convention held at Rutland on September 6, 1926; illustrated, seventy pages and cover.

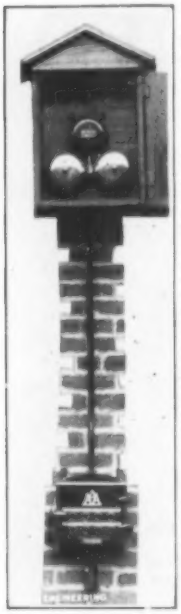
Fire Department, Kansas City, Mo.—Annual report of the department prepared by the Board of Fire and Water Commissioners; ninety-six pages and cover.

Fire Department, Elizabeth, N. J.—Twenty-fifth annual report of the Board of Fire Commissioners; thirty-five pages with a section containing a list of fire alarms for the year.

INDUSTRIAL PLANT PROTECTION

Test Made of Aero Fire Alarm System

Chief Daniel E. Johnson and other officials interested in fire protection in Bridgeport, Conn., recently attended a demonstration of the working of the first A. D. T. automatic fire alarm system to be installed in that city. The new A. D. T. system is known as the "Aero System" and has proven successful in other cities of New England.



The system, as installed by the American District Telegraph Company, consists of copper tubing wired over ceilings of a building, an inside detector, which sends a signal to the A. D. T. office, and an outside alarm and locater box, as illustrated in this article. The copper tubing is about one-eighth of an inch in diameter and hollow. It is placed at regular intervals on the ceiling, running to a circuit end and thence to the detector. Its operation is simple.

The tubing is filled with air at a certain pressure for the varying degrees of heat found in different rooms. A sudden increase of ten degrees in the temperature in any room only occasioned by a fire, expands the air in the tube and its compression closes a contact in the detector. The signal to the A. D. T. office follows and it is relayed to the fire department over the regular A. D. T. fire signal system.

The outside alarm or locater box contains two loud gongs which ring and notify passersby that there is a fire. The system is lightning quick and has one feature of improvement over the sprinkler system—there is no unnecessary water damage. The demonstration of the actual working of the system was authentic as far as it could be made. Only a few persons were "in the know," as to when the "fire" was going to be started, and firemen at the various companies which responded to the alarm did not even know that a test was going to be made.

In the rear of the Crane Company's plant on John Street in a small storage shed, Mayor F. W. Behrens of Bridgeport, dropped a match into a large pan of alcohol. The actual time was 3:28 when the flames were started. Less than a minute after the start of the fire the alarm was registered by the Aero System.

T. F. MAGNER.

Color Scheme for Marking Pipes

After many years of efforts of various engineering organizations to devise a means of marking pipes so that it would be easy to note the nature of the contents, a scheme has been planned which is uniform in character.

The standard scheme proposes the use of an identification mark made up of three distinct parts: (*a*) an identifying band of color, which indicates to which of the main classifications the material belongs; (*b*) a stenciled legend, abbreviated or otherwise, placed on the color band and the naming the material carried; and or (*c*) where desired additional colored styles of contrasting hues at the edge of the color band. Various combinations of these three elements are permitted in the various industries or plants provided the main classification color bands agree with the scheme. These identification marks shall be placed at intervals throughout the piping system to ensure ready identification during repair operations and in an emergency.

As an alternative to the use of an identifying band of color, part (*a*) above, the entire piping system may be painted in the appropriate main classification color. In this case the legend and (or) the stripes shall be placed at convenient intervals throughout the piping system preferably adjacent to valves and fittings.

Main Classification by Color

This part of the scheme is intended to identify the class into which the materials in the piping systems belong and not the actual contents of any one particular pipe. It establishes a basic fundamental principle applicable to all schemes for identifying piping systems and is intended to designate the pipe contents as belonging to a specific class of materials that are safe, dangerous or otherwise, depending on local conditions. The inclusion of all existing systems at present in use is made readily possible with minimum change by the adoption of the following color classification.

All piping systems are classified according to the character of material carried. Especially in an emergency the quick recognition of the contents of a piping system is of paramount importance. For this purpose, each piping system is classified, by the nature of its contents, into the following classifications:

Class	Color
A	Safe products—Green or the achromatic colors, white, black, gray, or aluminum
B	Dangerous materials—Yellow and orange
C	Protective materials—Blue
D	Extra valuable materials—Purple
E	Fire-protection equipment—Red

The above colors have been chosen to identify the main classification because they are readily distinguishable one from another.

Red has been assigned to fire-protection equipment because of long established custom. Yellow has been assigned to dangerous materials because of all the chromatic colors it has the highest coefficient of reflection under white light, and can therefore be seen under the poorest conditions of illumination. Further yellow is the traditional color of the quarantine flag and has been adopted as the caution signal for railroads and road traffic. The assignment of the other three colors follows in natural order.

No type of paint or other suitably colored coating is excluded. The selection of coating comes under the jurisdiction of the supervising engineer or person in authority and may be made to meet the diverse requirements of each case. All that the scheme requires is that the dominant hue of the band shall fall unmistakably within one or the other of the five spectral regions.

Colors which have a total reflective value too low to permit ready differentiation at minimum illumination are excluded. Median gray, which from the physiological or visual standpoint is situated about halfway between white and black, reflects approximately 25 per cent of the incident standard white light and is near the permissible limit of reflective value for poor illumination. The permissible limit of reflective value is provisionally established at 19 per cent.

An ordinary hand flash lamp may be used as the arbitrary measure of minimum illumination.

The sponsor organizations for this method of marking the pipes are the National Safety Council, and the American Society of Mechanical Engineers.

Chicago Hears N. F. P. A. Plans

At a luncheon under the leadership of Charles W. Folds, Chicago investment broker, local business men and civic workers had the opportunity of learning about the plan of the National Fire Protection Association for having ten field secretaries.

Percy Bugbee, field secretary and Dana Pierece, president of the association and the Underwriters' Laboratories, explained the future plans of the organization. Under the plan to raise a fund of $500,000 to finance the operation of the ten additional field men, Chicago has been assigned a quota of $30,000 a year for five years.

It is hoped by the constant work of the field men to be able to reduce the United States fire losses to the plane existing in European countries.

Sioux City, Ia., to Erect New Station—Council of Sioux City, Ia., are considering plans for the erection of a fire station to be erected in Riverside. It is expected that bids for the work will be advertised soon.

More Boxes for Salt Lake City—Twenty Gamewell fire alarm boxes will be installed in Salt Lake City, Utah. The improvement is being made under the supervision of Charles J. Reading, in charge of the fire alarm system.

South Dakota Firemen Hold Tournament—The forty-third annual convention and tournament of the South Dakota firemen was held in Pierre. The program opened with a parade, and tournament events were arranged for each of the four days of the meeting.

NEW FLOOD LIGHT CAR DEVELOPED FOR EMERGENCY AT LAWRENCE, MASS.

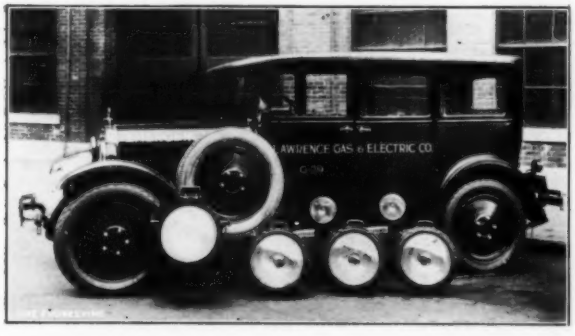
Second Unit Placed in Service by Lawrence, Mass., Gas and Electric Co., for Service at Fires in Locality

ANOTHER lighting machine has been placed in service for the fire departments of Lawrence, Mass., and the surrounding towns by the Lawrence Gas and Electric Company.

The new machine, a special type enclosed car, carries a larger amount of equipment than did the vehicle that preceded it and which went into operation two years ago.

At the time the first so called flood light truck was placed in operation it was considered the first complete machine of its kind and purpose in the United States. Page after page was written about it in the various gas and electric trade papers throughout the United States and it was later demonstrated at the Massachusetts State Firemen's Convention.

During the two years in which the previous machine was in service it answered over two thousand calls. In addition to



Emergency Light Car Used by Lawrence, Mass.

every alarm of fire sounded in Lawrence it was used on many occasions in the surrounding towns and in assisting police at scenes of drownings and accidents.

The new equipment consists of three, five hundred candle power flood lights; one, one thousand candle power flood light and a number of two hundred and fifty candle power lights. These lights are all portable and the five hundred candle power lights are each attached to five hundred feet of heavy rubber insulated wire on reels which permit the lights to be moved about to any position desired without having to discontinue the current. The one thousand candle power light has one thousand feet of heavy rubber insulated wire and like the five hundred candle power lights, the wires are attached to a reel which in turn connects to a master reel with an additional five hundred feet of wire. This permits the use of the lights, if occasion should arise, a thousand feet from the machine, in the instance of the five hundred candle power lights, and fifteen hundred feet from the machine in the instance of the one thousand candle power light.

The sedan on which this equipment is mounted has a special rear door, the entire width of the body. The lights are mounted on a platform level with the top of the driver's seat. Underneath this platform are the reels and the necessary tools and equipment for making quick attachment to the lighting system as soon as the vehicle arrives at a fire or at the scene of an accident.

The current necessary to operate these lights may be obtained at any electric light pole on the Lawrence Gas & Electric company system and the operators of this machine have become so proficient that in many instances of fire, according to Chief Michael McPhee, the lights have been in operation almost as quickly as the fire department has been able to get water upon the fire.

The present lighting machine has many improvements over its predecessor in that all of the present equipment is on swivel joints equipped with roller or ball bearings and carries first aid emergency kits, in the use of which the operators have been especially trained. Rubber gloves, pole climbing equipment and all paraphernalia necessary to make a quick attachment are carried in holders which permit immediate access as soon as the rear door of the machine is opened.

This new unit designed and built under the supervision of Assistant Engineer Gustavus S. B. Trott in the company garage and Duco finished at the Shawsheen Garages, Inc., has been the cause of much comment from Chief McPhee and the fire chiefs of the surrounding towns.

As near as can be learned, no other city in the State or in the eastern part of the country has just such an equipment as maintained by the local gas and electric company.

Fire Chief Michael McPhee of the Lawrence Fire Department is one of the most enthusiastic admirers of the new flood light machine of the Lawrence Gas & Electric Company. Chief McPhee states that it is pleasing to the eye but his enthusiasm applies more particularly to the extremely useful and highly efficient work it has done for the Fire Department.

Pumpers Can Reach Boston Tower

Tests were made in Boston, Mass., in the presence of Fire Commissioner Hulman, Chief Sennott, newspapermen and representatives of the underwriters, as to whether it would be possible to send a fire stream above the U. S. Custom House Tower, the tallest building in the city.

Streams from Top of Tower

The building in question is located in the downtown section of the city, and the top is five hundred feet above the level of the sidewalk. There is a four-inch standpipe extending from the street to the nineteenth floor and a three-inch standpipe from that point to the twenty-eighth floor or 461 feet from the ground level. At the various floors, there is the customary 2½-inch hose connection.

In the test, two pieces of American-LaFrance apparatus that were in service, were used—one has a capacity of 750 gallons and the other is a 1,000-gallon pumper. The 750-gallon pumper was connected to a high pressure hydrant and two lines of 3-inch hose, 250 feet long were laid from the pump to the standpipe connection. On the twenty-fourth floor, one hundred feet of 2½-inch hose was connected to the standpipe and carried to the balcony of the twenty-fifth floor; another line was stretched from the standpipe on the twenty-fifth floor so that there were two lines on the balcony. A fifty-foot length was also connected at the eighteenth floor. This line discharged 308 gallons with a nozzle pressure of sixty-eight pounds, while the line from the twenty-fifth floor discharged 159 gallons with a nozzle pressure of eighteen pounds. The total discharge was 597 gallons a minute.

The 1,000-gallon pumper also went through the test successfully.

Myers Now Chief of Toledo

District Chief Fred J. Myers has been appointed chief of the fire department of Toledo, Ohio, to fill the vacancy caused by the death of the late Chief Louis H. Elling. There have been subsequent promotions all down the line.

Chief Myers is married and lives with his wife and two children.

An interesting incident in connection with the appointment of the new chief is the refusal of Second Assistant Chief John McCune to be chief. Chief McCune is seventy-six years old, a firemen for forty-four years, and in respect to his length of service the appointment was offered him with the understanding that he would resign a month after his appointment. This would increase his appointment allotment $33 a month, but McCune preferred to continue on active fire duty.

Wolf Appointed Chief of Allentown, Pa.—Edgar W. Wolf has been appointed chief of the fire department in Allentown, Pa., by the city council, succeeding William R. Kranzley.

Milton, N. Y., Awaits Fire Apparatus—The firemen of Miilton, N. Y., are awaiting the delivery of their new fire apparatus.

Salvage Values After Fire

(*Continued from page 634*)

Gold and silver are commonly used in the trimmings and after a fire should be handled at once if tarnish is to be forestalled. What are known as gold and silver cloths should be dried quickly, as they will become a total loss if allowed to tarnish. Any silver or gilt trimmings will tarnish from age, if kept in stock for a long time. The tarnish from age is usually general, while tarnish from water will show in either spots or streaks. Mohair braids or trimmings will be damaged little, if any, by water, except in the bright colors which may run. Water will draw a great many of these trimmings out of shape, as they are frequently made of various combinations of wool, cotton, silk and mohair and the effect of water is different on each material. When wet, one material will shrink or stretch away from the other and draw the trimming out of shape.

Leather

Leather in boots, shoes or gloves is liable to get hard after water soaking with the added risk of cotton stitching being rotted by heat or water. Good sole leather may give a good salvage unless it is actually burned. Inferior leather in cheap shoes or gloves will give little salvage if exposed to any extent.

Lighting Fixtures

Lighting fixtures are susceptible to breakage and to injury by debris and by water dripping from above. In displays, lighting fixtures are found hanging in large numbers from the ceiling. It is practically impossible to protect displays of suspended lighting fixtures. Frequently fixtures are hung from a false ceiling or deck at the level of the ordinary living-room ceiling to display the fixtures more effectively and to facilitate wiring. Such false ceilings should be of strong construction and watertight. Exhibition of a large number of fixtures hanging from ceilings should be discouraged.

Millinery

Millinery can be broadly classed under three different headings: (1) Staples, such as velvets, velveteens, silks, laces, trimmings, ribbons, wires and buckram; (2) plumes; (3) fancies, consisting of flowers, feathers, birds, maline, chiffons and ornaments.

Staples are more than likely to be in fancy colors and are therefore subject to greater damage. In the fancy section the loss may be excessive. Flowers are nearly always wired together, and even when this wire is covered the water will reach it at the joint, in a short space of time the wire will corrode, and the flower will separate from the stem. In nearly every style of fancy the joining is done either by wire or glue, and when the wire is affected, as above stated, the glued fancies will all fall apart, water seeming to kill all the virtue in the glue. Wings and birds are sometimes put together by the same method and the same damage results. Feathers will, if wet, stick together in little bunches. They will never, even after drying, look the same and are decidedly unsalable. Plumes are the best of the articles that are not, strictly speaking, staples.

Maline and chiffons are absolutely of no value if they are once badly wet, even though the colors are fast. A starchy substance is used to give them a certain body and sheen; as soon as moisture touches them the life immediately leaves them. The buckles and ornaments are subject to different degrees of damage. These are made of cut steel, glass, aluminum, celluloid, rubber and bone. The glass will not damage unless the fire actually touches it; celluloid will ignite if exposed to very little heat. The rubber ornaments are made of some substance in conjunction with rubber, and it does not take much heat to melt them. Untrimmed hats or shapes are made of various materials such as felt, velvet or straw. Felt will spot from water worse than any other material and the cheaper the felt the more susceptible it is to damage.

The principal damage to the untrimmed velvet hat is in the lining, which is usually of buckram. This buckram, when exposed to dampness will shrink away from the velvet and even if the velvet is not affected will cause serious damage, as the value of an untrimmed hat is usually more than 50 per cent labor.

In straw shapes the damage is regulated by the grade of material. Straws of poor shape are filled with glue dressing and water will take all the shape out of them. The better grades of straw keep their shape very well, and will reblock. To reblock the Panama straw it is steamed or soaked in water and then put on a block and reshaped.

Generally the only chance for salvage to be realized on a trimmed hat is the possibility of some part of the trimming being utilized.

Muslin Underwear and Infants' Goods

Water will leave a stain which should wash out in any white goods the first time they are laundered, but which will affect the selling value. If smoke stains a sheer material, and this department is nearly all sheer material, the strain usually goes through to the other side, when radical measures are required to remove the stain. The fact that goods are white is an advantage as they can be boiled to remove stains. It is sometimes difficult to tell the difference between a bad smoke stain and a scorch. If the material is scorched it will tear as soon as it is handled. A smoke stain will not do this. Infants' goods and muslin underwear are frequently trimmed with ribbons, sometimes colored and sometimes white. The danger of the colors running is slight, as wash ribbons are generally used.

Paper

Paper in rolls or stacked does not burn readily, but it scorches at the edges. The same applies to printed sheets or unbound books. Newsprint paper must fit a press of certain width and other paper is sold in standard sizes. Cutting off the burnt edges is an expense and there is a considerable waste in cutting down to the next smaller standard size. Printed sheets are generally trimmed during binding and they often form quite a good salvage, but in either case heat may render paper, especially if it is largely made of wood-pulp, brittle and useless for later use. Covers of books are to a large extent stiffened and held together with glue, which softens if water is applied and lets the book fall to pieces. In this condition the paper is more easily burnt than if stacked tightly as sheets.

Patterns

Dress patterns consist of a number of pieces of thin paper which must retain their original size and shape absolutely, as the least difference in one piece will render the whole pattern useless. Water even in the smallest degree will stick the tissue paper together or shrink it so that it cannot be used.

Piece Goods

The salvage from silk, wood, linen and cotton goods, woven or knitted, depends mainly on quality. The best qualities generally show a good salvage, unless they are of very dainty color and light texture. Pure silk will stand considerable heat and water, unless it be loaded with shellac or gum, when it falls to pieces if it has been hot or wet. Artificial silk is generally subject to considerable water damage. Linens are generally thin and suffer disintegration by heat. Woven wool suffers less than fleeces in small parcels. Hard woven cotton is less easily damaged than the teazed-up varieties which look like flannel.

Ready to Wear Goods

Suits are usually kept in full length centre or wall cases. A damage that can be avoided and that often occurs is caused by water collecting on top of the cases and seeping through to the garments, streaking and staining them. When suits are wet they are badly damaged through the lining of the coat or jacket, shrinking and throwing the garment out of shape. Often the material will shrink and leave the lining showing all around the bottom.

Children's dresses are usually kept in drawers in the lower part of wall cases, or under the counter, and water or smoke is not likely to reach these garments. They are often affected by water running down the wall behind the cases and entering the drawers from the rear. This is a very bad damage as it is not anticipated and frequently is not discovered until every garment in the drawer is affected. The children's dresses are generally of wool or cotton, and are not damaged as badly as women's garments, as they are practically all staples and have no fancy colors, and even if damaged would sell much more readily than a woman's garment.

Ribbons

The manner of handling and the position in stock will govern to a large extent the damage sustained by ribbons. All the wider widths of ribbon are rolled usually in ten-yard lengths, in paper which is made expressly for the purpose to protect them from dust and dirt. The paper is about an inch wider than the ribbon and is rolled so as to leave only a half yard of ribbon exposed. The bolts of ribbon are sometimes stood on end, on top of each other, and sometimes laid sideways on long racks. The bolts on end are subject to much greater damage than those that are laid sideways, as the water dropping on them will go through the whole bolt of ribbon by way of the open edge, and streak the whole piece, while in those that are laid sideways it cannot penetrate further than the outside yard or two unless left to soak. The ribbons so kept must be handled quickly, as the paper used will absorb water. The smoke damage is light, as the smoke cannot come in contact with any great amount of ribbon due to

the protecting paper. All the narrow widths of ribbon and also velvet ribbons are kept in boxes. The velvet ribbons must be kept away from water, which affects them the same as it does the material. In some ribbon departments fancy bows and novelties of all descriptions for women's wear are made up and kept on display. These novelties are generally made of the most delicate shades and colors and are very perishable, and the chance of damage is very great.

Rugs

Rugs, when finished by the manufacturer, are shipped to wholesalers or retailers packed in common burlap. Burlap is used as a protection from soilage and not intended to protect the contents from water damage.

To protect the rugs against water damage, they should be wrapped in a waterproofed material and covered on the outside with strong burlap.

In most large stores rugs are packed one upon another in piles. These piles should be on platforms six inches or more off the floor. They should never be allowed to be piled on the floor as the water damage will then be considerable in the event of fire.

Rugs of an inferior grade will fade, and the colors run if subjected to water. Expensive rugs can be dried out and a reasonable salvage realized. Rugs on display should be covered after hours with a dustproof and waterproof cover.

Shoes (*See also Leather*)

Shoes, after finishing at the factory, are ordinarily placed in pairs, wrapped in tissue paper and enclosed in a cheap cardboard box with no thought given to the protection of the shoes from water. Expensive and cheap shoes are packed in the same manner. The shoes are sold by the manufacturers to the jobber in paper cartons or wooden cases, containing from twelve to sixty pairs of shoes in the boxes before mentioned. These cartons are made from various kinds of material, the majority of the cartons being made from corrugated paper. They are made with a view to form a practical shipping package in as cheap a manner as possible.

Silks

The poorer the quality of silk the greater the damage; in fact, if the silks were pure the damage would be very slight, except in the fancy shades which would streak or spot. Silks should be given immediate attention as the damage accrues very rapidly. The colors running in some of the silk will almost invariably spread to other parts of the stock and discolor the best grades, which might not otherwise be affected. There is another class of damage caused by the manner in which the stock is kept. With few exceptions silks are single width and are folded either in yard, meter, or yard and quarter lengths, covered on the outside with a lightweight and pliable pasteboard or heavy paper. It is impossible to keep handling these goods without tearing the covering, and as the tear usually occurs at the double edge the centre of the silk is affected. Dyes running from water damage would very quickly permeate a whole piece of silk and completely ruin it; especially is this true in the thinner or lighter grades, as the damage in this case, being crosswise of the goods, would show in every yard. To get rid of the stain it would be necessary to cut out a piece of every fold.

In goods which are rolled, such as linings or dress goods, the damage even on the double fold is not nearly so great as in the folded silks, because by cutting off the double edge, which is lengthwise of the goods, two pieces of perfect goods can be made, nearly half the width of the original. But this is not quite as good as would appear, for the reason that the minute when the width of the material is cut a limit is put on its utility. The narrower the raw material the more seams are necessary in the manufactured article, and a great many manufactured articles will not allow joining. Nevertheless, the value of the half width material would be greater than the yard or yard and a quarter length in the folded goods. The smallest loss in this department, unless increased by damage communicated from other silks, will be in the grosgrains, wash and summer silks, as these can all be washed.

Tea and Tobacco

Tea and tobacco give very poor salvage since even the slightest taint of smoke ruins them.

(*To be continued*)

Northwest Ohio Firemen Hold Convention—A. G. Eidmiller, of W. Milton, has been chosen president of the Northwestern Ohio Volunteer Firemen's Association. The fifty-fourth annual convention was attended by Governor Vic Donahey and other state officials.

Chief Lind Presented With Gold Badge

Orlander Lind, chief of the fire department in Kansas City, Kans., was presented with a gold badge by members of the department "in appreciation of the kindnesses to friends and pals." In addition to the badge, he was also given gold cap ornaments and coat lapel badges.

Chief Orlander Lind

The presentation was made before the firemen made their annual trip to the cemeteries on Decoration Day to place flowers on the graves of the deceased members of the department. Ray Moulton, chauffeur of No. 11 hose company, presented the gift and in a short talk paid tribute to the admiration that the men felt for their chief.

Chief Lind has been a member of the fire department for thirty-one years, and was assistant chief for fifteen years under ex-chief John McNarry. When Mr. McNarry resigned, Chief Lind was made head of the department, and he has held that office for three years.

In addition to the honor paid to him by the men, Chief Lind has been placed under civil service regulations by the state legislature in accordance with a measure that took effect on May 1, 1927.

CORRESPONDENCE

A Cooperative Plan in Fire-Fighting

To the Editor:

Washington Township, in California, has instituted a cooperative plan of fire-fighting, in which the various village fire departments assist each other in a systematic and well worked out plan. In order to give a clear idea of the working of this system, which we consider a model one, I might describe a fire which occurred in Niles recently.

A fire started in the rear of a grocery store at Niles, at 10:25 a. m. on June 2. Two companies from the Niles Fire Department responded. The fire had gained considerable headway, and as a strong wind was blowing, it seemed advisable to call for additional apparatus. A call was sent to the Decoto Fire Department by telephone, which is the second alarm assignment into Niles, and their company, an American-LaFrance 4-35 gallon tank chemical engine immediately responded, making the run to Niles, a distance of about three and one half miles, in about five minutes.

In the meanwhile, the Centerville Fire Department, whose company is on the third alarm assignment, was in readiness to go if an additional alarm were sent in. It was found unnecessary to do this, however, as the fire was quickly brought under control. If another fire should have started in either Niles or Decoto during the progress of the above described fire, the companies from Centerville and Newark would have responded.

By this method of co-operation the time element is cut to a minimum, as a fire in a neighboring district is treated as a regular alarm, and a company is prepared to "roll" immediately.

This plan, in the opinion of the fire officials of the community, has worked out very satisfactorily, and if in the future any additional fire districts are formed in this territory, their officials will be invited to co-operate with us along our present lines.

Very truly yours,

ROLAND BENDEL,
Chief Decoto Fire Department.

Decoto, Cal., June 20, 1927.

Portland, Ore., Talks to be Broadcast—The speeches made by fire chiefs at the I. A. F. C. convention in Portland, Ore., will be broadcast by station KEX.

Use Full Capacity of Pumpers

(*Continued from page 639*)

fire had gained entrance to the steel storage building and had also spread through one floor of the wood stock warehouse and was coming out of the south end, endangering the pattern storage building.

From this point on fire continued to spread until the entire block as described above had been involved.

The fire department held the fire from jumping the alley as noted in the preceding paragraphs.

Suggested Method of Handling the Fire

It is very likely that this fire could have been handled with the first alarm assignment, had the apparatus been used at its fullest capacity, and without delay.

Engine Co. No. 1 may be placed at hydrant No. 1 and two lines stretched to the fire. Both of these lines to be equipped with 1¼-inch nozzles. One line would operate on the box cars while the other line would enter the wagon box paint shop to hold the fire from spreading until additional lines were put into operation.

Engine Co. No. 2 to be placed at hydrant No. 5 and two lines stretched using 1¼-inch nozzles. One of these lines will be employed in wetting down the box cars and the other line to assist the first line in the operation of the wagon box paint shop.

Just as soon as the fire in the box cars has been brought under control, one line can do the wetting down while the other line may be used in the paint shop.

This will give three satisfactory lines for inside operation in the paint shop fire after the wetting down of the box cars.

Should the two lines operating on the box cars not be able to bring the fire under control due to the possibility of fire reaching the car filled with potash, then it will be necessary to transmit additional alarms at once.

But apparently, from the description, it was not until the fire was permitted to reach additional cars that the potash became involved, so that the above assignment should be able to prevent this occurrence. In preventing such, the chief problem will be handling the fire in the paint shop which has not gained much control upon the arrival of the department. Three good size streams in operation in this shop should certainly be able to bring the fire under control.

As to the necessity of transmitting additional alarms, the extent of the fire in the paint shop as well as the possibility of the cars containing potash becoming involved would determine this.

The fact that two lines operating in the paint shop were able to prevent the fire from spreading from this building to adjoining buildings shows that the fire had not attained much headway, so that three lines operating in the same building ought to bring the fire under control.

It must also be remembered that a fourth line might be available in the event that the fire is quickly brought under control in the box cars which would likely be the case if prompt action were taken.

It will be noted that the hose company did not stretch a hydrant line. This was considered advisable in that the men running with the hose company would thus be available for stretching second lines from Engine Cos. Nos. 1 and 2.

Truck company responding on first alarm should do the opening up and assist in whatever manner possible the engine companies operating on the fire.

As noted above, the point brought out by this fire is that the full effectiveness of the department cannot be obtained unless each unit in the department is used to its maximum capacity. Had the two engines running on the first alarm been required to furnish two streams each, it is not likely that the fire would have gotten beyond the first alarm stage.

Revised Program of I. A. F. C.

Since the publication of the program for the coming convention of the International Association of Fire Chiefs at Portland, Ore., changes have been made in the plans. The revised program is as follows:

Monday, Aug. 8th (Pre-convention Entertainment)

All day trip around Mt. Hood and down Columbia River Highway, followed by Illuminated Fire Boat Drill on the river in evening.

Tuesday, Aug. 9

9.00 a.m.—Opening Session
Music by Los Angeles Fire Dept. Band.
Singing by Portland Police Quartette.
Invocation—Archbishop Edw. J. Howard.
Address—Governor Patterson.
Address of Welcome—Mayor Geo. L. Baker.
Address—President Mark Ryan, Pacific Coast Association of Fire Chiefs.
Response—Chief Joseph N. Sullivan, Utica, N. Y.

11.00 a. m.—Memorial Service at the David Campbell Memorial.
Address by Dr. E. H. Pence.
Unveiling at Memorial.
Music by Police Quartette.
Music by Band (Los Angeles Fire Dept.)
Adjournment for official photograph.

2.00 p. m.—Business Session.
Topic No. 1, "Traffic Problems and Co-operation between Fire and Police Departments," by Chief John Kenlon, New York City.
Discussion: Police Chief D. J. O'Brien, San Francisco, Cal.; Police Chief Jenkins, Portland, Ore.; G. W. Booth, National Board of Fire Underwriters.

3.00 p. m.—Topic No. 2, "Preparedness for Major Disasters," by Chief R. J. Scott, Los Angeles, Cal.

4.00 p. m.—Topic No. 3, "Arson Investigation," by W. A. Groce, Asst. State Fire Marshal of Washington.

7.00 p. m.—District Association Dinners (at respective hotels).

Wednesday, Aug. 10

9.00 a. m.—Business Session.
Topic No. 4, "Need for Fire Fighting Equipment in High Buildings During Construction," by Chief John Kenlon, New York City.

10.00 a. m. until 5.00 p. m.—Demonstrations by Exhibitors. (These to be listed on official program).

7.30 p. m.—Business Session.
"Fire Prevention Address," by B. F. Irvine, Editor, Oregon Journal.

8.15 p. m.—Round Table.

Thursday, August 11

9.00 a. m.—Business Session.
Topic No. 5, "Sprinkler Failures and How to Guard Against Them," by Frank C. McAuliffe, Chief Fire Patrols, Chicago, Ill.
Topic No. 6, "Extinguishing Oil Fires with Foam," by Mr. M. B. Anfenger, Standard Oil Co.
Discussion.

2.00 p. m.—Business Session.
Topic No. 7, "Humidity and Its Relation to Fires," by Batt. Chief R. Schubert, San Francisco, Cal.
Topic No. 8, "Modern Assignment Systems and Running Cards," by L. G. Holden, Chief Fire Dept., Portland, Ore.
Evening—Dinner and Ball at the Auditorium.

Friday, Aug. 12

9.00 a. m.—Business Session.
Topic No. 9, "The Hazards of Shingle Roofing," by Mr. S. R. Allen, Chief Fire Dept., Brooklin, Mass.
Topic No. 10, "Gasoline Fire Boats," by Mr. Walter Fordward, of the Byron-Jackson Pump Co., Berkeley, Cal.
Selection of next convention city. Election of officers. Adjournment.

Few Hose Streams Used in Cincinnati

During the past thirty days, the Cincinnati, Ohio, fire department has not had to resort to hydrant streams in fighting fires. Captain John J. Conway of the Salvage Corps said that sixteen years of fire prevention in that city had saved more than $2,500,000 in fire insurance premiums. While the city was reducing the amount of premiums, the number of men in the fire department was also reduced. The personnel has been decreased by 132 men since 1916.

You Are Right—This is a Fire Department

There is little cause to wonder why a fire in Smyrna assumes large proportions, when one makes a study of the antiquated fire apparatus that is used there. Judging from the position of vantage, the one in the hose cart must be a company officer.

List of Attendance

(*Continued from page 643*)

Riley, E. B., Chief, Keene, N. H.
Riley, Frank E., Middleboro, Mass.
Robinson, Stanley, Worcester, Mass.
Rose, C. B., New York, N. Y.
Rose, C. H., Ex-Chief, New London, Conn.
Ruthenberg, H. P., New York, N. Y.
Sanborn, Oliver T., Chief, Portland, Maine.
Sargent, Fred M., Chief, Sunapee, N. H.
Saulnier, John E., Chief, North Adams, Mass.
Saunders, E. F., Chief, Lowell, Mass.
Savage, John A., Asst. Chief, Valley Falls, R. I.
Schleinitz, William, Dayton, Ohio.
Scully, John J., Boston, Mass.
Seagrave, Thomas, Boston, Mass.
Sears, C. E., Chief, Claremont, N. H.
Sennott, Daniel F., Chief, Boston, Mass.
Serafin, William T., New London, Conn.
Shaw, M. A., Middleboro, Mass.
Shepard, W. C., Chief, Pittsfield, Mass.
Shipman, Thomas H., Chief, New London, Conn.
Small, Roy K., Chief, Augusta, Maine.
Smith, Charles H., Chelsea, Mass.
Smith, James E., Chief, Nashua, N. H.
Smith, Roland L., Cambridge, Mass.
Spaulding, Howard C., Cambridge, Mass.
Spellman, E. J., Boston, Mass.
Spring, Arthur W., Chief, Laconia, N. H.
Stahl, Ernest J., Boston, Mass.
Stewart, C. D., New York, N. Y.
Stevens, George B., Chief, Kingston, N. H.
Stockwell, Carl, Chief, Burlington, Vt.
Stone, E. V., Chief, Ludlow, Mass.
Stowe, Lewis F., Chief, Milford, Conn.
Sylvester, Clarence N., Boston, Mass.
Taft, Frank, Boston, Mass.
Tappen, Robert M., Chief, Gardner, Mass.
Thomas, Patrick J., Chief, Berlin, N. H.
Thompson, E. Henry, Boston, Mass.
Thurston, Ralph E., Chief, Putnam, Conn.
Tierney, Daniel B., Chief, Arlington, Mass.
Tiffany, F. M., Ex-Chief, Boston, Mass.
Tighe, William A., Ind-Chief., Boston, Mass.
Toone, G. Gilbert, Boston, Mass.
Tracet, Frank E., Chief, Woburn, Mass.
Tracey, Hurbert W., Boston, Mass.
Trecartin, John H., Chief, Lubec, Maine.
Trefry, A. W., Portland, Maine.
Turnbull, Charles A., Waban, Mass.
Turner, Harry M., Chief, Springvale, Maine.
VanValen, Alfred, Boston, Mass.
Veit, Victor H., Chief, Stamford, Conn.
Warnock, James, Chief, Swampscott, Mass.
Webber, Joseph A., New York, N. Y.
Weeks, Reuben, Ex-Chief, Providence, R. I.
Wheeler, A. D., Boston, Mass.
White, Arthur B., So. Lancaster, Mass.
White, Herbert P., Groton, Conn.
Whiting, Homer B., Chief Hampton Beach, N. H.
Williams, E. W., Asst. Chief, Lynn, Mass.
Williamson, E. E., Boston, Mass.
Wood, Robert M., Boston, Mass.
Woods, William F., Chief, Portsmouth, N. H.
Woodward, A. P., Chief, Danielson, Conn.
Young, Daniel F., Chief, Cranston, R. I.

Ohio Fire Chiefs Hold Convention

(*Continued from page 644*)

the benefit to volunteer firemen injured or killed while in service. The present law of this state has been construed by the Attorney General to mean that, in case of injury, firemen would receive only a fraction of such pay as he had normally received as a fireman and not a fraction of his regular salary or earnings. Since the total pay for fire services of a volunteer member is very small, it can readily be seen that the benefits of the law are practically negligible. Leaders of the discussion were Chief Bascom of Norwalk, Chief Moore of Martins Ferry, Chief Cross of Willard, and Chief Shultz of Ashland. Following the discussion, a committee was appointed to study further the present law, find ways to eliminate the bad points, and to act toward securing adequate legislation in the future.

Another very interesting talk was given by Chief Dr. Wise, of Medina. Dr. Wise's talk included a great many details pertaining to the operation and function of his own organization, and especially that pertaining to the fighting of country fires.

The chiefs of the Industrial Plant Brigades met in the Council Chamber, with Chief Philip J. Harty, of the Youngstown Sheet and Tube Company, acting as chairman. Problems peculiar to the industrial chief were discussed.

Wednesday afternoon, starting at 1:30, the field demonstrations of apparatus and appliances were held at North Park. These demonstrations included the operation of many pumpers, a demonstration of gas masks, inhalators, safety appliances, and several types of foam appliances which were used to extinguish several lakes of burning oil. While these demonstrations were going on, sandwiches, soft drinks, coffee, ice cream, etc., were served by members of the Mansfield Fire Department. These demonstrations were in charge of Chief Thomas McFarland, of Marion, and John C. Schellin, of Wooster.

Wednesday evening, at 7:30 p. m., a banquet was held at the Elks Home, Mr. Edwin G. Slough being the toastmaster. The invocation was by Reverend R. C. Goebel. The Address of Welcome was by Honorable J. Earl Ports, Mayor of Mansfield. The Response was by Chief D. K. Moser, of Warren, Ohio. The principal address of the evening was by Mr. T. Alfred Fleming, of the National Board of Fire Underwriters.

Thursday morning, June 9, starting at 9:30, the final session of the convention was held. The first address was by Assistant Chief James E. Granger, of the Cleveland, Ohio, fire department, on "The Advantages of Training and Education of Firemen." Chief Granger commented on the excellent results noticeable at Cleveland and urged that all chiefs enlarge upon this section of their work.

W. J. Canada, Field Engineer of the National Fire Protection Association, New York City, then read a paper on, "Electrical Fire Hazards," following which there was a conference of city electrical inspectors in a side room. The chairman of this meeting was F. O. Evertz, electrical engineer of the Ohio Inspection Bureau, and the leaders of the discussion were W. J. Canada, T. E. Neer, electrical inspector, division of State Fire Marshal, and various representatives of public utilities.

The final address of the session was by Assistant State Fire Marshall, C. S. Magruder, on inspection work. Mr. Magruder gave a very interesting address and urged the chiefs to make more frequent inspections, to use his office and assistance at every available opportunity and to do more to prevent fires.

Following this was the report of the Secretary-Treasurer, the reports of committees and election of officers for the ensuing year. The new officers are as follows:

President: Chief Thomas J. McFarland, Marion, O.
First Vice President: Chief Robert Leedom, Portsmouth, O.
Second Vice President: Chief E. J. Hunsinger, Massillon, O.
Secretary-Treasurer: Phillip J. Harty, Youngstown Sheet and Tube Co.

"Southern Regulars" Arrange Trip

Under the direction of P. O. Hebert of the Eureka Fire Hose Manufacturing Company, a trip has been arranged for the "Southern Regulars" to the convention of the I. A. F. C. at Portland, Ore. Mr. Hebert has arranged trips for the "Southern Regulars" for many years in the past for those chiefs in the southern cities who plan to attend the convention of this association.

According to the schedule arranged, the party will leave Atlanta by way of the Southern Railway on August 1 at 11:30 p .m.; Anniston, 3:00 a. m., August 2; leave Birmingham by way of Frisco lines on August 2 at 12:30 p. m.; Memphis, August 2, 11:25 p. m.; Dallas, August 3 at 11 p. m.; Denver, August 5 at 1:45 p. m., and arrive in Portland, Ore.; on August 7 at 10:30 a. m.

Returning, the party will leave Portland at 8 p. m. on August 12, leave Chicago on August 15 at 9:15 p. m., and arrive in Atlanta, Ga., the starting point, on August 16 at 8:25 p. m.

Tarentum, Pa., to Erect New Stations—Bids are being invited in Tarentum, Pa., for the construction of three new fire stations. It is planned to have the stations completed before the fall.

With the Camera Man at the New England Convention

Directors of Mass. State Firemen's Ass'n.—Chief W. H. Mahoney, Peabody, M. J. McGonagle, Boston, D. J. Looney, Secty, Capt. J. H. Day, Lynn, and Capt. Henry Hilton, Gloucester.

Registration Committee: Geo. W. Austin, P. Hildreth Parker, Herbert K. Pratt, members Box 52 Ass'n—and their neckties were bright red.

Chief J. E. Ducheneau, Southbridge, Mass., W. H. Lewis, Fabric Fire Hose Co., Boston, W. H. Guertin, Supt., Worcester Protective Corps.

A Few of the Vermonters—A. C. McDonald and Chief F. A. Hutchinson, White River Junction; Chief A. H. Koltonski, Rutland, Chief C. V. Stockwell, Burlington and Chief J. C. Henry, Barre.

List of Exhibitors at Portland, Me.

The Gamewell Co., Newton Upper Falls, Mass.
Fire Alarm Boxes, Recorders, Etc.
Larkin Mfg. Co., Dayton, Ohio.
Dept. Supplies, Nozzles, Syphons, Etc.
Davis Emergency Equip. Co., New York City.
Fume Masks.
Fabric Fire Hose Co., New York.
Mine Safety Appliance Co., Pittsburgh, Pa.
Burrell Gas Mask, Pullmotors, Etc.
Akron Brass Mfg. Co., Wooster, Ohio.
Republic Rubber Co., Youngstown, Ohio.
Tools, Hose Nozzles, Etc.
Haskell Removable Oil Trough Co., Chelsea, Mass.
Harrington Seaberg F. A. Tel. Co., Moline, Ill.
Fire Alarm Boxes and Recorders.
Pennwood Motor Oils, W. A. Wood Co., Boston, Mass.
A. P. Smith Mfg. Co., E. Orange, N. J.
Hydrants.
Chase Handle Co., New Durham, Mass.
Axe Handles, Etc.
Kil-Soot Chemical Co., New York City.
Chimney Cleaning Compound.
American-LaFrance Fire Engine Co., Elmira, N. Y.
"Metropolitan" 1,000-Gal. pumper for Turners Falls, Mass.
City Service Ladder Truck with 600-Gal. pump for Shrewsbury, Mass.
Nozzles, Tools, Supplies, Etc.
Extinguishers.
"Type 75"—750-Gal. pumper for Rockport, Mass.
Darling Valve Co., Williamsport, Pa.
Valves and Hydrants.
Holtzer-Cabot Electric Co., Boston, Mass.
Fire Alarm Boxes, Systems, Etc.
Samuel Eastman Co., Concord, N. H.
Nozzles, Deluge Sets.
C. G. Braxmar Co., New York City.
Emblems and Badges.
Eureka Fire Hose Co., New York.
Henry K. Barnes & Co., Boston, Mass.
Fire Hose, Fire Supplies, Tools, Etc.
Frontier Mfg. Co., No. Tonawanda, N. Y.
Oak Motor Oil.
Alden Spear's Sons Co., East Cambridge, Mass.
(N. E. Distributors.)
Arthur H. Blanchard, N. E. Repr.
a—Boston Woven Hose & Rubber Co., Cambridge, Mass.
b—Pacific Portable Pumper for Forest Fires.
c—Northern Fire Apparatus Co.
d—General Carbonic Co. of N. Y. Fyre-Freez.
L. P. Brown Machine & Tool Co., Attleboro, Mass.
Nozzles.
American Fire Equipment Co., Boston, Mass.
Tools, Sirens, Supplies.
Lawrence, Mass., Gas & Electric Co.
Emergency Spot-Light and Search-Light Car.
Combination Ladder Co., Providence, R. I.
500-Gal. Combination Pumper.
General Motors Truck Co., C. N. Sylvester, Boston, Mass.
Model T-20 pumper.
(Pumps water while truck is moving.)
D. E. McCann's Sons, Portland, Me.
"Model 50" 500-Gal. pumper, Triple Comb.
Mack Internation Motor Co., New York City.
Triple Combination 400-Gal. pumper.
General Carbonic Co., New York City.
Fyre-Freez Extinguishers.
The Ahrens-Fox Co., Cincinnati, O. N. E. Repr., Harry Carlow, Taunton, Mass.
750-Gal. Pump and Hose Car for Engine 38, Buffalo, N. Y.
The Seagrave Corp., Columbus, O.
Surburbanite-400-Gal. pumper.
Special 600-Gal. pumper, Old Kennebec-Westbrook, Me.
Hand Tub built. 1,850-cap. 222 ft. for contrast.
Maxim Motor Co., Middleboro, Mass.
500-Gal. Triple Combination Ladder Truck.
Foamite-Childs Co., Utica, N. Y.
"Thoroughbred" 600-Gal. Triple Combination.
Foamite Chemical Units.
Foamite Foam Generator.
FIRE ENGINEERING.
Brand-It-Co., Chicago, Ill.
Interchangeable Brands for burning names on tools and apparatus.

Hough Joins Garrison Fire Alarm

Walter R. Hough, president of the board of fire commissioners of Baltimore, and chairman of the Fire Commissioners Section of the National Fire Protection Association, has been elected a vice-president of the Garrison Fire Detecting System, Inc., of New York. Mr. Hough for more than ten years has been closely identified with the development of national fire prevention work. He was one of the originators of the movement leading to the formation of the National Fire Waste Conference of the Chamber of Commerce of the United States. Mr. Hough is an editor of the Fire Prevention Year Book.

Siren Starts Minneapolis Dance

With the shriek of a siren, a crowd estimated at 6,000 people, swung into the rythm of a dance at a ball given by the Minneapolis, Minn., firemen. It was the first social event to take place in the new $3,000,000 Municipal auditorium erected in the city. Claude Harris, a member of the fire department, composed "The Firemen's March," which was played at the dance.

Although the firemen hoped that the night one be a quiet one as far as the number of fire alarms went, a section of the dance floor was fitted up as a temporary fire headquarters.

Preceding the dance, a motion picture of one of the last runs of the horse-drawn fire apparatus was shown. Several thousand gallons of ice-cream and soft drinks were served.

The firemen's band was organized in 1919 by Chief Ringer and the Minneapolis Civic and Commerce Association, and is one of the best known firemen's bands in the country. It has toured the eastern states and has given concerts in several provinces in Canada. It has frequently broadcasted programs over the radio.

The object of the ball was to raise money for the firemen's welfare fund.

Fund Set Aside for Detroit Band

For the first time in the history of the city of Detroit, Mich. an official appropriation of $2,000 has been made by the City Council, effective July 1st, as part of the Fire Department budget for the maintenance of the Fire Department Band, thus relieving the Firemen's Fund Association of that annual disbursement.

The band was organized in 1920 and to-day it has a total personnel of 45 members. It plays at all official functions of the department, as well as at public concerts, parades, funerals and

Band of the Detroit Fire Department.

for the radio. The band master is a private musician who receives $10 for each rehearsal he conducts. The firemen who play in the band organization are allowed whatever time they lose of their own when playing. They have regular days for practice once a week and all of the bandmen are on the same shift.

The uniforms of the members were originally purchased by the Firemen's Fund Association. Future allotments of band uniforms will be provided for out of the city appropriation.

WM. JEROME DALY

Springfield Starts Salvage Work

A salvage corps owned and maintained by the city has been established in Springfield, Mo., under the leadership of Chief W. R. Price. This is novel because few, if any, salvage corps are so operated.

The company consists of four men and the apparatus used was formerly a hose car, which was overhauled and equipped with the necessary tools and appliances to successfully carry on salvage work.

Chief Price considers such a unit to be essential to all departments, large or small, and he hopes with this company to reduce the fire loss in his city. At present, a member of the Springfield department was sent to St. Louis to receive instruction in salvage work under Chief O'Donnel, and when he returns, he will instruct the other men in the proper salvage corps methods.

Retiring Chief Presented With Watch

Ernest E. Leffen, chief of the San Bernardino, Cal., fire department was presented with a platinum case watch by his men in appreciation of the work that he did to promote the efficiency of the service. A group of prominent people of the city and various associations called to pay their respects to the retiring chief.

The watch was engraved with the following inscription: "Presented to Ernest E. Leffen by the boys of the San Bernardino fire department, May 31, 1927."

BRAXMAR
BADGES

have been the recognized standard for fire departments for almost 50 years. Used everywhere. More than 900 designs. Send for illustrated catalog and prices.

C. G. BRAXMAR CO.
242 W 55th St., N. Y. C.

The Burrell All Service GAS MASK

The Standard for the Fire Fighters of America

The Burrell All Service Gas Mask is the only mask approved by the United States Government for complete protection against Carbon Monoxide, Ammonia and every known poisonous gas. Write for Bulletin F-3.

Mine Safety Appliances Co.
Braddock Ave & Thomas Blvd. Pittsburgh, Pa.

MATHEWS
(Reg. U. S. Pat. Off.)
FIRE HYDRANTS
for
DOMESTIC
and
HIGH PRESSURE
Service

NOTE—

The positive waste value.

All operating threads are dry, being above the stuffing-box.

No toggles, no small, quick-wearing parts.

All moving parts are bronze or bronze-bushed.

The outside casing permits replacing a two-way standpipe with a steamer and two-way standpipe without digging up the ground.

An easily installed
EXTENSION SECTION
readily adapts them to new grades.

VALVES and BOXES
CAST IRON PIPE
(Sand-Cast or "Sand-Spun")
FITTINGS

R. D. WOOD & CO., Phila., Pa.

Worcester Alarm Signal
A size for every town and factory.
Steam or air operated.

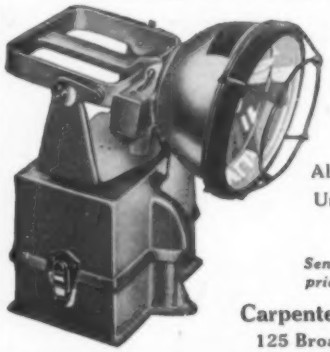
Successful Since Sixty-Eight

Union Water Meter Company
Worcester, Massachusetts
New York, 50 Church St. Phila., 411 Bulletin Bldg.

UNION

Water Meters - Chronometer Valves
Easy Turning Stops - Pressure Regulators
Presses for Lining Pipe - Alarm Signals

CARPENTERLITES



Portable Electric Searchlights for Fire Departments

Two Switches

Two Filament Bulbs

Powerful

Aluminum Construction

Universal Joint Motion

Dependable

Send for catalog and prices of full line

Carpenter Mfg. Company

125 Broadway, Boston, Mass.

MAXIM FIRE APPARATUS

If your apparatus is Maxim-built it will prove dependable and reliable at all times.

Complete information upon request.

MAXIM MOTOR COMPANY, Middleboro, Mass.

Metropolitan Sales Agents:

The Woodhouse Manufacturing Co., 156 Chambers St., N. Y.

SOUTHWORTH

Quality Fire Apparatus

300 to 1000 Gallon Triple Combination Pumpers, City Service Trucks, Combinations and Chemical Cars.

Connections solicited throughout the East

Southworth Machine Company

Fire Apparatus Division

Address all correspondence to the Chelsea Office.

Sales Office	*Telephone*	*Factory*
52 Sagamore Ave., Chelsea, Mass.	Chelsea 2105	Portland, Maine

In a HENDERSON Uniform

you always get correct tailoring, dependable quality, reliable workmanship, at the lowest prices consistent with values.

Catalogue illustrating the popular Styles of Firemen's Service Parade Uniforms or for prize contests, as well as Shirts, Belts, Hats, Caps, Badges, Banners, &c., mailed on request.

Write giving Number of Outfits desired and color Cloth preferred.

HENDERSON & CO.

11th & Race Sts., Philadelphia, Pa.

The Perfect Satisfaction and economy of wearing the

"FAMOUS KALAMAZOO"

Firemen's Uniforms has been proven by thousands of firemen. Catalog F501 will tell you all about them.

The HENDERSON-AMES CO.

KALAMAZOO, MICH.

JACOB REED'S SONS

Founded 1824 by Jacob Reed

FIREMEN'S UNIFORMS

Thoroughly tailored of especially selected fabrics. Uniforms that look well, wear well and that will give entirely satisfactory service.

Reed's Uniforms are most economical because they represent full value for the amount expended.

Write for catalog and prices.

1424-1426 Chestnut St., Philadelphia, Pa.

"Pirsch" Builds Complete Line of Motor Apparatus

Let Us Submit Bids on Your New Apparatus

Catalogue No. 16 Now Ready! Send for it.

PETER PIRSCH & SONS CO.

Since 1857

Kenosha, Wisc.

JOHN H. CLAY, INC.

1320 Ridge Ave., Philadelphia, Pa.

Established 1864

Manufacturer Siamese connections, fire hose couplings, plug connections, wrenches, etc.

FIRE DEPARTMENT ACTIVITIES

Compressed Air Siren Installed at Exeter, N. H.—A siren operated by compressed air has been installed in Exeter, N. H.

Providence, R. I., Receives Aerial Ladder—After conclusive tests, the new aerial ladder truck of Providence, R. I., was officially accepted.

Luxemberg, Wis., Awaits Fire Apparatus—Luxemberg, Wis., is awaiting the arrival of the apparatus which was ordered some time ago.

Manteca, Cal., May Purchase Apparatus—The Manteca, Cal., chamber of commerce recommended the purchase of new fire apparatus.

Firemen Take Part in Rose Festival—Exhibitions of life saving in the civic stadium was one of the events of the rose festival held in Portland, Ore.

Oaklyn, Pa., Celebrates 25th Anniversary—Oaklyn, Pa., fire department celebrated its twenty-fifth anniversary with a vaudeville show and dancing.

Lynn, Mass., Receives New Pumpers—One of the new Ahrens-Fox pumpers delivered to Lynn, Mass., has passed the Underwriters' test; the other has not been tested, as yet.

Station Opened in Stoughton, Mass.—A central fire station has been officially opened in Stoughton, Mass. James J. Pye has been chief of the department for twenty-one years.

Orange County, Cal., Association Formed—The Orange County, Cal., Firemen's Association was formed with representatives from twelve fire departments.

Everett, Wash., Opens New Bungalow Fire Station—The new bungalow fire station erected in Everett, Wash., has been officially placed in service.

Indiana Firemen Meet in Bluffton—The Northern Indiana Industrial and Volunteer Firemen's Association held their convention in Bluffton.

Apparatus Moved in Brockton, Mass.—Both the fire alarm system and fire apparatus have been shifted to the new $55,000 fire station in Brockton, Mass.

Defiance, Ohio, Presented with Fire Apparatus—A resident of Defiance, Ohio, presented the city with a new piece of fire apparatus.

Eldora, Ia., Insures Firemen—Eldora, Ia., has taken out accident insurance policies for the members of the fire department.

Must Pay for Out-of-Town Fire Calls—A recommendation has been made that the city of Holland, Mich., must be compensated for all out-of-town calls of the fire department.

New Bremen, Ohio, Receives New Pumper—A Peter Pirsch triple combination pumper has been delivered to New Bremen, Ohio.

Pennsylvania Towns Purchase Sirens—Sterling fire sirens have been sold to the following Pennsylvania towns: Coatesville, Bird-in-Hand, Gordonville and Terre Hill.

Providence Firemen Awarded Red Cross Diplomas—Thirty-eight members of the Providence, R. I., fire department have been awarded Red Cross diplomas for first aid work.

Haverhill, Mass., Interested in Light Outfit—Members of the council of Haverhill, Mass., are interested in the acquisition of an electric floodlight outfit that is operated by a dynamo carried by the same truck.

New Fire Alarm Stations for Philadelphia—New fire alarm stations will be erected in Philadelphia, Pa., to act as an emergency measure should the main system be damaged. Similar sub-stations will be erected in Germantown.

Anderson, S. C., Department Zoo Increases—Eight young crows have been added to the zoo that is maintained by the Anderson, S. C., fire department. At present the collection consists of parrots, rabbits, squirrels, guinea pigs and geese.

Stevens Heads North Dakota Firemen—L. E. Stevens of Tower City has been elected president of the North Dakota Firemen's Association at the convention held in Harvey, N. D. Next year the association will meet in Langdon.

Kansas City, Kans., to Install Traffic Sirens—Four traffic sirens will be installed in Kansas City, Kans. The installation was highly recommended by Chief Olander Lind to the safety council.

Firemen Charged with Rifling Club—Charges were made that members of the Philadelphia, Pa., firemen rifled the Engineers Club when a fire damaged the building. Chief Ross B. Davis immediately ordered an investigation of the charges.

Birmingham, Mich., to Have Paid Department—Plans are being made for a paid fire department for Birmingham, Mich. In this year's budget there is a provision for the employment of eight men.

Minneapolis Investigates Need for 77 Men—An engineer of the city planning department is investigating the need of Minneapolis, Minn., for seventy-seven more firemen. This addition was recommended by the Underwriters.

New Hampshire Chiefs to Meet September 6—The annual convention of the New Hampshire Fire Chiefs' Association will be held at Somersworth, on September 6. The board of directors of this association met in Manchester to arrange for the coming meeting.

Newport News Has Lowest Loss in Virginia—According to figures made public by the National Board of Fire Underwriters, the per capita loss of Newport News, Va., is the lowest in the state. The per capita loss is forty-nine cents and the second lowest is Roanoke with a loss of $1.20.

Campaigning for Pittsburgh Pay Increase—Data is being collected to further the plans of a councilman to increase the pay of the Pittsburgh, Pa., firemen. The new plan is not only to give the men increases the first, second and third years but to have increases, every five and ten years in the service.

Promotion of New York Lieutenants Delayed—Due to action of the Board of Estimates in New York city, appointment of new lieutenants to the fire department has been delayed. It passed a ruling that the number of captains be increased from 320 to 324 but reduced the number of lieutenants from 504 to 500.

Protection for Wilmington, N. C., Suburbs—Plans are being considered for the protection of the suburban communities around Wilmington, N. C., which at present have no permanent fire protection facilities. It is expected that a pumper will be purchased and housed at some central point to the outlying districts.

Everett, Wash., Chief Quiety Married—Chief C. W. Swanson of Everett, Wash., was quietly married to the assistant cashier of the county treasurer's office. The couple went to Tacoma, were married, and then each returned to their respective duties. Chief Swanson has been head of the department for several years.

University of Wisconsin May Have Firemen's School—A firemen's school may be established at the University of Wisconsin patterned after those conducted at the University of Illinois and the Iowa State College. Consideration is being given to the plan of combining the three-day convention of the Wisconsin Paid Firemen's Association with the proposed short course.

Portland Department Orchestra to Broadcast—During the convention of the International Association of Fire Chiefs, which will be held in Portland, Ore., the orchestra of the fire department will broadcast through station KEX. Prior to the various numbers, sirens will blow and gongs will sound. Those who are forced to remain at home, will have the privilege of listening in on some of the activities.

Maryland Firemen to Meet in Westernport—The annual convention of the Cumberland Valley Volunteer Firemen's Association will be held in Westernport and Luke, Md. The section is known as the tri-towns and also includes Piedmont, W. Va. As it is believed that hotel accommodations will not be adequate, arrangements have been made with the adjutant-general of the National Guard to set up a number of tents.

Philadelphia After Fireworks Sellers—The newly organized "flying squad" of the Philadelphia, Pa., department made a raid on one of the stores and confiscated a large amount of fireworks. The fire marshal received numerous complaints of fireworks being sold to children, and the squad was organized to stamp out the evil. An act of the legislature gives the city firemen the right to confiscate all fireworks within the city limits.

Maxim Delivers Many Pieces of Apparatus—The recent deliveries of the Maxim Motor Company include a 500-gallon pumper to Bogota, N. J., a two-tank combination chemical and hose car to Bristol, Conn., a 500-gallon pumper to Hingham, a 500-gallon pumper to Enosburg Falls, Vt., a double bank ladder truck to Lebanon, N. H., a 350-gallon pumper to Falmouth, Mass., a 500-gallon pumper to Wilbraham, Mass., a 750-gallon pumper to Rockville, Conn., a 500-gallon pumper to Oak Bluffs, Mass., and a 500-gallon pumper to Mattapoisett, Mass.

PROPOSED IMPROVEMENTS

Jacksonville, Duval Co., Fla.—Bids are to be invited at once for the construction of a new fire station at 18th Street and Talleyrand Ave.

Orange, Liberty Co., Fla.—Citizen's Committee recommended to the City Council the purchase of additional fire apparatus.

Millersfalls, Franklin Co., Mass.—Considering the installation of a new fire alarm system in this city, according to reports.

New Gretna, Burlington Co., N. J.—A new company was organized here recently with Everett Allen as chief.

South Amboy, Middlesex Co., N. J.—Plans are being made for the purchase of a new piece of apparatus for the fire department, according to reports.

East McKeesport, Allegheny Co., Pa.—Plans being made for the construction of a new fire house in this city, according to reports.

Norristown, Montgomery Co., Pa.—Reports state the Good Will Fire Co. are raising funds for the purchase of fire equipment.

Tasley, Accomac Co., Va.—According to reports the Tasley Fire Co. raising funds for the purchase of a new chemical fire engine and equipment.

When
In the Market
for equipment or supplies make your wants known through FIRE ENGINEERING. More bidders mean more competition and better satisfaction.

Wanted

Fire Alarm System Man

A good Fire Alarm System man wanted. Address communications to: G. E. Zimmerman, Chief Coronado Fire Dept., Coronado, California.

6-29

For Sale

Fire Apparatus

Triple combination Howe-Ford motor fire truck. First class condition. Apparatus run less than 1000 miles. Excellent for small town. Address: Geo. W. Frear, Clerk, West Haven, Conn. 6-15-29, 7-13

Proposals for Fire Hose

BOROUGH OF HAWTHORNE, N. J.

Bids opened July 1st, 1927

Sealed bids will be received by the Board of Commissioners of the Borough of Hawthorne, N. J., on Friday, July 1st, 1927, at eight p. m. daylight saving time, at Lafayette School, corner of Warburton and Lafayette Avs., in said Borough, for two thousand feet of two and one-half inch fire hose, which must have approval of Board of Underwriters, and be of National Standard Thread; as many different makes may be bid on as the bidder wishes; the bid will be subject to the Borough ordering so much feet or all as and when it sees fit.

A certified check to the order of The Borough of Hawthorne in the sum of three hundred dollars must accompany each bid as a guarantee of good faith and the Borough reserves the right to reject any or all bids, or to waive any defects or informalities in the best interests of said Borough.

John A. Shea,
6-29 Borough Clerk.

Proposals for Fire Apparatus

Village of Larchmont, N. Y.
Bids opened July 11, 1927

NOTICE IS HEREBY GIVEN that sealed bids will be received by the Board of Trustees of the Village of Larchmont, Westchester County, New York, until 7.30 p. m. (Daylight Saving Time) on Monday, July 11, 1927, at the office of the Board of Trustees, Municipal Building, Village of Larchmont, New York (Post Office address: Larchmont Avenue and Boston Post Road, Larchmont, New York) for furnishing and delivering the fire apparatus hereinafter described complete with necessary and proper equipment therefor, in accordance with these specifications.

Each bidder must furnish satisfactory evidence of his ability to construct the apparatus specified, and state the location of the factory where apparatus is to be built, and the make and type of each part of the machine not manufactured in his factory. The contractor shall guarantee the apparatus and equipment furnished against any and all defects which may be caused by defective materials or workmanship within one year from the date of the acceptance of the apparatus. This guarantee shall not cover breakage caused by neglect, misuse, wrecking caused by actual fire service, collisions or carelessness on the part of others than the maker after the apparatus is accepted.

Each bid shall be accompanied by complete and detailed specifications of the apparatus and equipment which it is proposed to furnish and to which the apparatus furnished under the contract must conform, as well as with the following specifications and requirements:

It is the intent of these specifications to cover the furnishing and delivering to the Village of Larchmont a complete apparatus ready for use and fully equipped as hereinafter specified. With a view to obtaining the best results and most acceptable apparatus, these specifications cover only the general requirements as to construction and tests to which the apparatus must conform, and details in part as to finish and equipment and appliances to be furnished. Minor details of construction and materials, where not otherwise specified, are left to the discretion of the contractor, who shall be solely responsible for the design and construction of all features.

The apparatus shall be of the latest type, symmetrically proportioned and carefully designed to suit the nature of the service which the apparatus must perform if accepted.

All materials, workmanship and finish entering into the construction of the apparatus must be of the best of their respective kinds, and conform to the character of the apparatus and purpose for which it is intended.

Each bidder shall make accurate statements in his specifications as to the weight, wheel-base and principal dimensions, and of the make, kind and composition of material and type of construction of the following parts: Cylinders, pistons, connecting rods, valves, crank case, frame, crank and cam shafts, transmission shafts, drive and jack shafts, gears, bearings, axles, housing of transmission and of differential and jack shafts (or rear axles if direct drive), sprockets, chains, torsion and radius rods, springs, wheels, ladders, chemical tanks and other major equipment. He shall specify the safe maximum speed for which the motor is designed, and the gear reduction between motor and driving wheels for each position of the gear shift.

Failure to specifically mention herein or in specifications furnished with the bid, any particular detail forming a necessary and usual part of a complete apparatus of this kind, shall not relieve the contractor, and such part or parts shall be furnished by him as a part of the contract the same as if fully described and particularly specified herein.

The contractor shall defend any and all suits and assume all liability for any and all claims made against the Village of Larchmont or any of its officials or agents for the use of any patented process, device or article forming a part of the apparatus or any appliance furnished under the contract.

In event the apparatus fails to meet the test requirements on first trials, second trials may be made at the option of the contractor within thirty (30) days of the date of the first trials. Such trials shall be final and conclusive and failure to comply with these requirements shall be cause for rejection. Failure to make such changes as the Board of Trustees may consider necessary to conform to any clause of the specifications, within thirty (30) days after notice is given to the contractor to make such changes, shall also be cause for the rejection of the apparatus. Permission to keep or store the apparatus in any building owned or occupied by the Village of Larchmont or its use by the fire department during the above specified period with the permission of the contractor shall not constitute acceptance of the same.

Bidders will give approximate date of delivery of the apparatus F.O.B. Larchmont, New York, which shall be within 120 days after the contract is signed. A competent man in the employ of the contractor shall remain with the apparatus for a period not exceeding four days, during which instructions in operating the apparatus shall be given to such members of the fire department as the Chief of the Fire Department shall designate; all expenses of operating, prior to acceptance or to being placed in fire service, shall be borne by the contractor.

The apparatus fully loaded with the equipment to be carried and the full complement of men must meet the following tests: It must make a continuous run of twenty miles within one (1) hour, over any route selected by the Board of Trustees over paved and macadam roads in good condition, but not including any grade over ten (10) per cent, during which test it shall operate without undue heating or showing lack of power.

It shall, from a standing start, at the foot of any grade up to eight (8) per cent on a paved street, attain a speed on the grade of fifteen (15) miles per hour within five hundred (500) feet of the starting point.

It shall be able to back up a twenty per cent grade, and shall meet such other reasonable tests as might be met in service and as may be required by the Board of Trustees and the Chief of the Fire Department.

The apparatus shall conform fully to the "Suggested Specifications for Gasoline Automobile Fire Apparatus" as issued from time to time by the National Board of Fire Underwriters, Committee on Fire Prevention and Engineering Standards and to the specific specifications for each respective type of apparatus hereinafter specified.

I. A City Service Hook & Ladder Fire Truck, complying with the general specifications hereinabove set forth and the following Special Specifications:

Motor—Six Cylinder, at least 100 Brake H. P. and the following Fire Equipment:

1—40 gallon capacity chemical tank with all necessary brass pipes, gauges, valves, fittings and chemical hose and automatic reel or hose basket.

Ladders:

1—50′ or 55′ extension
2—35′ extensions
1—29′ straight
1—24′ straight
1—20′ straight, with roof hooks
1—16′ straight, with roof hooks
1—12′ straight, with roof hooks
1—12′ extension
1—Browder life net folded and mounted with cover.

All other standard, necessary and usual equipment therefor.

II. One combination Foam and Chemical and Hose Fire Truck, complying with the general specifications set forth and conforming to the following Special Specifications:

Motor—6 cylinder at least 100 Brake H. P. and the following Fire Equipment.

2—40 gallon capacity chemical tanks with all necessary brass pipes, gauges, valves, fittings, and with 200′ of ¾″ hose, same to be mounted in basket on running board.

H. D. Foamite chemical equipment with 400′ of hose and siamese nozzle, with necessary piping and hose reel or basket.

Hose body to carry at least 800′ of 2½″ hose.

All other standard, necessary and usual equipment therefor.

Bidders will give a separate price for each piece of apparatus and will also give a price separately for the allowance which they will make for each of the following pieces of apparatus of the Larchmont Fire Department.

1—American La France City Service Truck.
1—American La France Chemical Truck.

Bidders will state earliest delivery date.

Information regarding the purchase of the above apparatus may be obtained from Mr. R. C. Roetger, Central Union Trust Company, 80 Broadway, New York, N. Y., or Larchmont, New York.

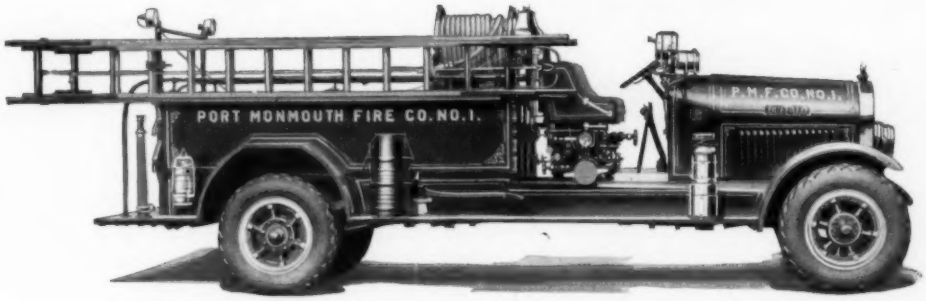
The Board of Trustees reserves the right to consider bids until July 25, 1927, before awarding the contract, and the right is reserved to include or exclude any alternative bid called for herein, as may be determined by the Board of Trustees, to reject any or all bids, or to accept any bid or bids which Board of Trustees may deem advantageous to the Village of Larchmont.

BY ORDER OF THE BOARD OF TRUSTEES
VILLAGE OF LARCHMONT,
JOHN R. TULLOCH
President

EUGENE D. WAKEMAN,
Clerk

Dated, June 21, 1927.
6-29-27

Buffalo Type 50



Speaks For Itself In
Construction — Service — Power

Write for Detailed Specifications

BUFFALO FIRE APPLIANCE CORP.

44 Central Ave., Buffalo, N. Y.

No. 27 Medium Blue

No. 25 Dark Blue

Dressy Uniform Shirts

MADE of medium blue TubTest (fast-color) chambray or dark blue TubTest percale; with two detachable laundered collars to match. This Signal, now specified by Fire Chiefs in several American cities, is favored because it is dressy, practical; because we guarantee absolute satisfaction in every shirt.

SIGNAL SHIRT COMPANY, Racine, Wis.

Quality First — Signal TubTesT — Union Made

ALUMINUM
Fire Alarm Boxes

We originated and were first to successfully use aluminum fire alarm cabinets—*now conceded everywhere to be the best.* They can not rust or corrode, are strong yet light in weight.

Adequate fire protection demands reliable fire alarm signal equipment. H-S fire alarm boxes can be absolutely depended upon to operate perfectly every time.

Made by specialists in the design and manufacture of fire alarm signal equipment. Write for bulletins.

HARRINGTON-SEABERG CORP.,
DEPT. G., MOLINE, ILLINOIS
Manufacturers
Traffic Signal Equipment — Fire Alarm and Police
Magnetic Sign Flashers — Signal Equipment
Complete Fire Signalling Equipment for Municipalities. Complete Installations

A Nation-Wide Service for Better Protection Against Fire Loss and Water Damage

PROTECTION A.D.T. SERVICES

The remarkably efficient A. D. T. System of Central Station Night Watch and Fire Alarm Service has played a large part in helping to cut down the fire loss of the country; and the A. D. T. System of Sprinkler Supervisory Service has been instrumental in saving millions of dollars in water damage.

An Invaluable Service

It is generally known that water damage in sprinklered premises is considerably greater than fire damage, and it is a fact that in a great majority of sprinklered equipments no one on the premises knows how to shut off the water. Hence, the great importance and value of our Supervisory Service in not only recording water flows, but immediately sending representatives who know how to stop them.

Over $20,000,000,000

worth of property throughout the country is protected by A. D. T. services, and fire officials in cities everywhere are finding A. D. T. cooperation an invaluable aid in their work.

Send for Complete Information!
Controlled Companies

American District Telegraph Co.
Executive Offices, 183 Varick St.
New York City

BADGES
of Every Description

QUALITY GUARANTEED
Right Prices
Prompt Delivery

RELIANCE ENG. CO.

Write for latest catalogue and price list

EVERSON-ROSS CO.
88 Chambers St., New York
Also makers of the ROSS Helmet

MORSE
FIRE BOAT EQUIPMENT
Invincible and Callahan Nozzles

Fire Department Supplies

are in use throughout the country and giving unsurpassed service.

Every fire official should be fully acquainted with Morse equipment and have our catalog and other descriptive literature on file for ready reference whenever considering the purchase of new equipment.

You will find that it pays.

Write for Catalog

Andrew J. Morse & Son, Inc.
221 High St. Established 1837 Boston, Mass.

The New and Improved Electric Siren for Fire Apparatus

Greatest Electric Siren Ever Built for Fire Apparatus

SIRO-DRIFT TRADE MARK

SIRO-DRIFT

A Siren that will operate on one-tenth of the battery juice of any other electric Siren of its size. The Siren drifts 90% of the time without the aid of the battery. You just touch the Siren button for one-half second and the Siren drifts on for two or three minutes.

One-half second of current, applied means ten seconds running without any current, with plenty of noise—or two to three minutes at a slower rate of speed.

SIRO-DRIFT

Is 8 inches in diameter and gives the rising and lowering tones that carry the greatest distance. It can be heard through the thickest traffic for about two miles. Has a specially designed rotary that takes a great deal less power to drive than any other electric Siren.

We gladly ship a SIRO-DRIFT SIREN to any city on approval, transportation prepaid. Comes in three brackets—cross bar, on frame in front of radiator and under-the-hood.

Send at once for complete information

B & M Siren Manufacturing Co. LESTER H. MILES, *Owner*
929-931 South Main Street, Los Angeles, Calif.

RED ARROW SIREN

Siren with Storm Hood

1. Double-tone, and of greatest carrying power.
2. Ball bearings throughout.
3. Accurately machined and balanced.

30 Days' Free Trial
Write for Circulars

DECOT MACHINE WORKS
Sauk City, Wis.

Novo Acid Jars & Holders

of every description, stronger than lead and non-corrosive. Used by departments throughout the country.

Chemical Tanks and Lally Quick Opening and Self-packing Top for Chemical Tanks

Lally Improved Fire Hose Couplings, Fire Extinguishers and Charges, Fire Hose and Fire Department Supplies in General

Send for Complete Catalog

LALLY FIRE APPLIANCE CO.
Wilmington Brass Co., Wilmington, Del.

CONVENTION DATES

June 27-29—MICHIGAN ASSOCIATION OF FIRE DEPARTMENT CHIEFS. Annual Convention, Bay City, Mich. Secretary, Chief Frank Ford, Highland Park, Mich.

June 28-30—SOUTHERN NEW YORK VOLUNTEER FIREMEN'S ASSOCIATION. 32nd Annual Convention, Sag Harbor, L. I., N. Y. Secretary, August Kalb, Rockville Center, L. I.

July 12-14—MICHIGAN STATE FIREMEN'S ASSOCIATION. 53rd Annual Convention, Lansing, Mich. Secretary, H. L. Williams, Luddington, Mich.

July 13-14—INDIANA FIREMEN'S ASSOCIATION. 10th Annual Convention. Indianapolis, Ind. Secretary, Frank H. Miller, Fire Headquarters, Terre Haute, Ind.

July 19-23—SOMERSET COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. Annual Convention, Rockwood, Pa. Secretary, J. R. Shanks, Rockwood, Pa.

July 21-22—CENTRAL NEW YORK VOLUNTEER FIREMEN'S ASSOCIATION. 34th Annual Convention, Cortland, N. Y. Secretary, Thomas F. Murray, Cortland.

July 25-28—DOMINION ASSOCIATION OF FIRE CHIEFS. 19th Annual Convention, Hull, Quebec. Secretary, Chief James Armstrong, Kingston, Ont.

July 27-28—VERMONT STATE FIREMEN'S ASSOCIATION. 38th Annual Convention, St. Albans, Vt. Secretary, Edwin D. Moore, Bennington, Vt.

July 31-Aug. 1-2—IDAHO STATE FIREMEN'S ASSOCIATION. Annual Convention, Wallace, Idaho. Secretary, Willard Adams, Rigby, Idaho.

Aug. 1-2—WASHINGTON STATE FIREMEN'S ASSOCIATION. Annual Convention, Chehalis, Wash. Secretary, H. S. Jenkins, City Electrician, Fire Headquarters, Bellingham, Wash.

Aug. 4-6—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. 34th Annual Convention, Portland, Ore. Secretary, State Fire Marshal Jay W. Stevens, 1014 Merchants' Exchange Bldg., San Francisco, Cal.

Aug. 6—CALIFORNIA STATE ASSOCIATION OF FIRE CHIEFS. Annual Convention, Portland, Ore. Secretary, Chief William Cooper, Richmond, Cal.

Aug. 7-8—OREGON STATE FIRE CHIEFS' ASSOCIATION. 8th Annual Convention, Portland, Ore. Secretary, Thomas Coates, Tillamook, Ore.

Aug. 8-9—UTAH STATE FIREMEN'S ASSOCIATION. Twentieth annual convention, Springville, Utah. Secretary, H. E. Anderson, fire headquarters, Salt Lake City.

Aug. 9—MASSACHUSETTS PERMANENT FIREMEN'S ASSOCIATION. Annual Convention, New Bedford, Mass.

Aug. 9-11—CUMBERLAND VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 26th Annual Convention, Western Port, Md., Secretary, C. L. Jacobs, Waynesboro, Pa.

Aug. 9-12—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 55th Annual Convention, Portland, Ore. Secretary, Chief J. J. Mulcahey, Yonkers, N. Y.; Executive Secretary, State Fire Marshal Jay W. Stevens, Merchant's Exchange Bldg., San Francisco, Cal.; Chairman, Exhibit Committee, Chief Albert Herring, Murphysboro, Ill.

Aug. 14-16—NEW YORK STATE PERMANENT FIREMEN'S ASSOCIATION. Annual Convention, Elmira, N. Y. Secretary-Treasurer, Frank A. Emden, 1200 Lenox Avenue, Utica, N. Y.

Aug. 16-19—FIREMEN'S ASSOCIATION STATE OF NEW YORK, and WESTERN NEW YORK VOL. FIREMEN'S ASSOCIATION. Joint convention of both associations, Niagara Falls, N. Y. Secretary, State Association, Fred A. Davis, Fort Edward, N. Y.; Secretary, Western N. Y. Association, Henry A. Clark, 21 Porter Avenue, Batavia, N. Y.

Aug. 19-20—CONNECTICUT STATE FIREMEN'S ASSOCIATION. 45th Annual Convention, West Haven, Conn. Secretary, D. W. Harford, South Norwalk, Conn.

Aug. 22 (week of)—NORTH CAROLINA STATE FIREMEN'S ASSOCIATION. Annual Convention, Greensboro, N. C. Secretary John L. Miller, Concord, N. C.

Aug. 24-26—VIRGINIA STATE FIREMEN'S ASSOCIATION. 41st Annual Convention and tournament, Alexandria, Va. Secretary, E. K. Landis, Pulaski, Va.

Aug. 24-27—CALIFORNIA STATE FIREMEN'S ASSOCIATION. Annual Conference, Stockton, Cal. Secretary-Treasurer, H. E. Strasser, 1171 Tenth Street, San Diego, Cal.

Sept. 7—DELAWARE STATE FIREMEN'S ASSOCIATION. 7th Annual Conference, Rehoboth Beach, Del. Secretary, Sam H. Carson, Dover, Del.

Sept. 7-8—MISSOURI STATE FIRE CHIEFS' ASSOCIATION. 5th Annual Convention, Kirksville, Mo. Secretary, District Chief J. T. Lynch, Kansas City, Mo.

Sept. 7-8—MISSOURI ASSOCIATION OF FIRE FIGHTERS. 2d Annual Convention, Kirksville, Mo. Secretary, M. J. Mulvoy, 3500 S. Grand Boulevard, St. Louis, Mo.

Sept. 12-14—ARKANSAS STATE FIREMEN'S ASSOCIATION. Annual Convention, Russellville, Ark. Secretary, H. D. Compton, Little Rock, Ark.

Sept. 13-15—ILLINOIS FIREMEN'S ASSOCIATION. 40th Annual Convention, Jacksonville, Ill. Secretary, Roy A. Alsip, Champaign, Ill.

Sept. 13-15—MASSACHUSETTS STATE FIREMEN'S ASSOCIATION. Annual convention, Salem, Mass.

Sept. 20-21—IOWA STATE FIREMEN'S ASSOCIATION. 50th Annual Convention and Anniversary, Emmetsburg, Ia. Secretary, E. E. Parsons, Marion, Ia.

Sept. 22-24—NEW JERSEY STATE FIREMEN'S ASSOCIATION. 50th Annual Convention and Anniversary, Atlantic City, N. J. Secretary, William Exall, Chamber of Commerce Bldg., Newark, N. J.

Sept. 23—NEW JERSEY STATE FIRE CHIEFS' ASSOCIATION. Annual Meeting, Atlantic City, N. J. Secretary, Fred A. Trowbridge, 17 South Street, Morristown, N. J.

Oct. 4-6—PENNSYLVANIA STATE FIREMEN'S ASSOCIATION. Annual Convention, Shamokin, Pa. Secretary, Charles F. Clark, 411 Bellevue Avenue, Wayne, Pa.

Oct. 17-19—KANSAS STATE FIRE CHIEFS' AND FIREMEN'S ASSOCIATIONS. 11th and 40th Annual Conventions, Kansas City, Kan. Secretary, Chief K. D. Doyle, Wamego, Kan.

Salvage Corps Wins City Suit

Kansas City, Mo., must contribute to the upkeep of the Salvage Corps according to the ruling of the circuit court. The decision upholds the validity of the contract which formed the basis of the suit.

The legal action was to compel the city to pay $2,500 towards the support of the salvage corps in accordance with the fee paid by the agents. The city refused to pay the amount and argued that the corps was a private institution. In 1903, the insurance agents entered into a thirty-year contract in which the city agreed to turn over to the agents all revenue derived from license fees paid by the fire insurance companies, agents and brokers. The association was to pay the cost of operating the underwriters' patrol.

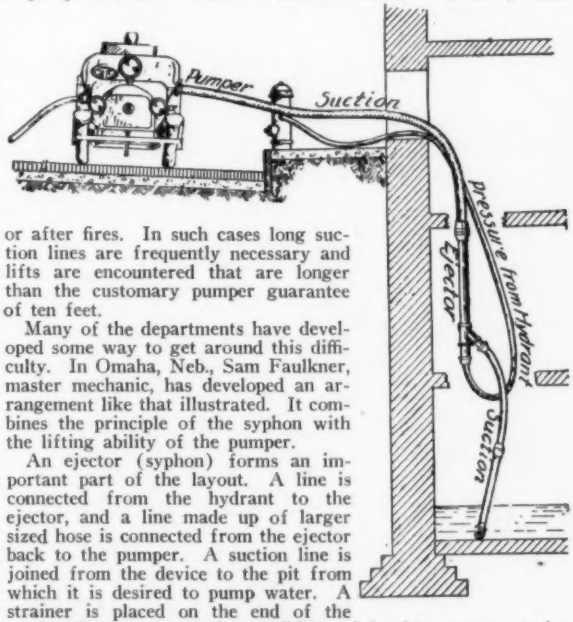
The agents allege that in 1903 Kansas City was in financial difficulty and at the invitation of the city, the patrol was organized and the 30-year contract was signed.

The patrol maintains three pieces of automobile apparatus and has a force of twenty-eight men. The city argue that the patrol performed a duplication of tasks which were done by the fire department. The city manager implied that the city could handle the salvage problem alone and had already purchased one squad car and was contemplating the purchase of others.

It is probable that the case will come up again in the supreme court.

Pumping Through Long Suction Lines

Besides fighting fires, fire departments are often called upon to pump out cellars that have become flooded after heavy rains or after fires. In such cases long suction lines are frequently necessary and lifts are encountered that are longer than the customary pumper guarantee of ten feet.



Many of the departments have developed some way to get around this difficulty. In Omaha, Neb., Sam Faulkner, master mechanic, has developed an arrangement like that illustrated. It combines the principle of the syphon with the lifting ability of the pumper.

An ejector (syphon) forms an important part of the layout. A line is connected from the hydrant to the ejector, and a line made up of larger sized hose is connected from the ejector back to the pumper. A suction line is joined from the device to the pit from which it is desired to pump water. A strainer is placed on the end of the suction line to prevent the possibility of foreign matter entering the pump and acting as an abrasive.

In operation, the water flows from the hydrant through the ejector and back to the suction line of the pumper. The pumper assists the water flow. The rush of water by the opening provided for the connection of the suction line creates a vacuum, and some of the water at the bottom of the pit is sucked up and discharged together with the water from the hydrant. In this way water can be lifted through large vertical distances.

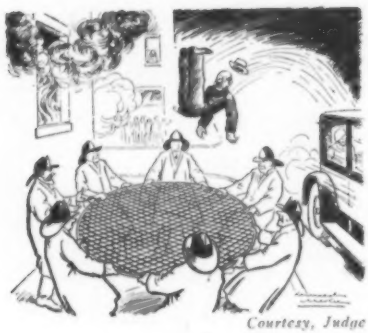
The principle is not a new one, although the application is probably not well known to firemen. The theory is utilized in the construction of tools and instruments in other professions outside of the fire service.

There are no moving parts in the construction of the ejector. Essentially it consists of a Y-shaped fitting. It can be made in the fire department shops and should be useful in checking the damage done in buildings by water accumulating in basements.

Siren Installed in Bangor, Me.—A siren has been installed in Bangor, Me., and replaces the one destroyed by a recent fire.

Ft. Collins, Col., to Add More Boxes—Eighteen additional fire alarm boxes will be installed in Ft. Collins, Col.

FALSE ALARMS



Courtesy, Judge

"Drop the net, boys. That bird didn't jump from our fire—he's just a fool pedestrian hit by an automobile."

WHERE CREDIT IS DUE

At a promotional examination in one fire department, the question that appeared to puzzle many was "give in detail how hot air explosions are made."

A fireman who submitted himself for examination chewed his pencil for a while and then he wrote in his examination book, "God made all things—even hot air explosions."

Some time later when the books were corrected and distributed, this fireman was surprised to see the following comment along side of the answer that he had written to the question given:

"God gets the credit—you don't."

THE MORAL IS—

"It was wonderfully brave of you to stick to your post and notify every one of the fire," insisted the young reporter.

"Maybe," said the hotel telephone girl, "but, gee, I got a kick out of it! You see, the fire broke out at three in the morning and an old guy in Room 1492 was pretty sore because I waked him up. 'You so-and-so,' he says, before I had a chance to tell him the house was on fire, 'what do you mean by ringing me up so-and-so.' So as sweet as you please, I says, 'Excuse it please. Wrong number.' He's in there yet."—*Life*.

Before doing some things, it is necessary to secure more advice than in doing other tasks. A major after consulting with a general is capable of telling a whole army what to do—and they do it. But a dozen volunteer firemen require the advice of the whole town as to what to do, and when it comes to fighting the fire, the chief has to do it.

THIS WAS TOO MUCH

"Of all the sarcastic, independent, rubbing-it-in kind of fellows with the most impish kind of humor, the firemen in this city win the laurels," remarked the nice old lady at the afternoon tea.

"Why are you getting so excited. They aren't such a bad lot."

"Well, just read what it says in the paper. 'After the fire at the bedding factory was under control, the firemen played on the ruins all night.'"

A WASTE OF TIME

A fireman from the rural section of New York state paid a visit to New York city, both for business and to spend some of his hard earned money in the "roaring forties" section of the theatre district.

While on his visit, it was his good fortune to see a number of companies respond to a fire in the high value district. A number of appliances were used that he had never seen before. When he returned home, he started to tell his friends of the wonderful appliances that they had in New York.

"Was it a Baker nozzle?" asked one.

"No."

"Maybe, it was one of them Hart nozzles?" queried another.

"No."

"Maybe, it was one of them new Heffernan nozzles?"

"No. To tell you the truth fellows, I think that you are wasting time because even if you did tell me what kind of a nozzle it was, I wouldn't know."

THIS IS NO STATIC

Members of a colored fire company in the south were invited to attend the christening of the new acquisition to a company member. Firemen like to eat, so with the prospects of a good meal before them, there was a full representation of the fire service.

"Yo sure got a big crowd here, Moe," said one guest.

"Dat's fine cause Dinah she sure likes crowds—we want everybody to see our little Electricity."

"Electricity? Dat's one funny name to give a child."

"Nothing funny about that name," said Moe. "Dat's de only name for the baby. See deres Dinah and deres Moe and what comes from a dynamo but Electricity!"

HE WAS WORSE OFF

The volunteer fire company in a Pennsylvania town started a custom of having informal discussion on some fire topic after the monthly meeting. Each one of the members was called upon by the president to tell of a tight place that they were in at a fire.

One fireman described the time that he was on the roof of a building when the brick wall started to bulge, while another told of the time that he was in a cellar of a burning house when the beams commenced to fall about him.

"Aw, you fellows make me laugh—you ain't never been in a tight place. I have a friend who is also a volunteer fireman who is in a tight place most all the time."

"Why, what's the trouble with the fire department?"

"Nothing's the matter with that. He's a waiter in a restaurant in Edinburgh, Scotland."

NOW THEY KNOW

Perhaps it may not be so in your town, but in some towns the fire chief is considered a man about town, especially so after a large fire. In this municipality, the fire department had put out a particularly bad fire—the wind was blowing, there were wooden shingle roofs nearby and there was every possible requisite for the start of a conflagration. But the firemen succeeded in preventing the fire from doing a large amount of damage, although two houses were destroyed.

And so the chief was particularly in the limelight. At the local radio broadcasting station the honeyed voice of announcer said, "Now folks, the next voice that you will hear will be that of Chief Dusenberry who will tell you how he put out the big fire last night. Step up chief and tell the audience how you did it."

The chief advanced nervously to the microphone and in a scared voice said, "Hello every one—I put it out with water."

WELL PREPARED

"I want an insurance policy."

"Accident or fire?" inquired the agent who began to visualize a good commission.

"I guess you'd better make it accident—you see I just got married."

SPEAKING OF SMOKY ATMOSPHERES

A bright glare in the sky was recently seen by Pittsburgh residents. One fantastic theory is that was the sun.

A fool there was and he took a chance—
They carried him off in the ambulance.

The American worker is fired with a spirit of hope and ambition—that is if he is not just merely fired.

"John, will you get up and light the camp fire."

"Quiet, Marie, the forest rangers will hear you and arrest you for making incendiary speeches."

Courtesy, Collier's

The Fireman's Day Off

LARKIN Shut-off Nozzles

Over 2000 Fire Departments

have 15,000 Larkin Shut-off Nozzles in service. They have a successful record that is not exceeded by any article used in the fire service. Specify and insist upon them in buying new apparatus.

Write for catalog

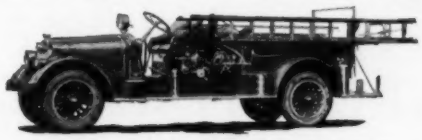
The LARKIN Mfg. Co.

Dayton, Ohio

High Grade Fire Dept. Supplies of All Kinds

"UNIVERSAL"

MOTOR FIRE APPARATUS



Every type of standard equipment in any combination to suit your requirements

Write for free copy of "Reliable Fire Apparatus"

W. S. NOTT COMPANY

Established 1879

201 N. 3d St., Minneapolis, Minn.

Triple Combinations

300-350 and 500 Gallons Capacity

Light and Heavy Hook and Ladder Trucks.
Miscellaneous Fire Fighting Equipment.
Fire Department Ladders.

Write us when interested

COMBINATION LADDER CO., Inc.
381 Fountain St. Providence, R. I.

Clifton Salvage Covers

Are made of strong, heavy duck and lapped seams and are designed of such thickness and weight as to be light enough to be handled quickly and rigid enough for the most strenuous service. They are rubberized on both sides with a double coating of a high grade, long life, rubber compound.

CLIFTON SALVAGE COVERS are built to stand the heaviest abuse and are used by many of the large Protective Departments.

May we send you further particulars?

Clifton Manufacturing Company

Jamaica Plain District :: Boston, Mass.

DONTFEAR

Smoke and Fume Respirator

Firemen who enter buildings filled with smoke, fumes and poisonous gases will find the "DONTFEAR" an absolute protection. Hang around neck before putting on helmet, always ready for use.

Price $5. With airtight goggles and 5 extra canisters $7.50.

Gibbs-Wahlert Mask Co.

Factory:
386 Jay St.,
Brooklyn, N. Y.

Address communications to
Station G, Box 168,
New York City

Eastman Improved Platforms and Holders

Write for Catalogue

are indispensable where high pressure service is required. With Eastman equipment any size streams can be easily handled by one man.

Eastman Nozzles and DeLuge Sets

are designed by engineers who for over thirty years have specialized in equipment for producing fire-fighting streams that are unsurpassed for solidarity, distance and effectiveness.

Samuel Eastman Co.,

Concord, N. H.

BI-LATERAL FIRE HOSE

THE BI-LATERAL FIRE HOSE CO.

230 West Randolph St., Chicago, Ill.

The City of Wheeling just purchased 5,000 feet of Bi-Lateral Fire Hose coupled with rocker lug couplings. This city purchased 5,000 feet last year and it is believed that as soon as their department is equipped with this improved construction in fire hose they will be able to cut their hose expense to less than half of what it has been previously. Let the BI-LATERAL FIRE HOSE COMPANY tell you why this may be true.

6 Patented Features

ERICK SIREN

Thorough Weather Protection
Erick Sirens do not clog up. Snow and ice cannot enter and stop sounding rotor. Completely protected and sheltered from outside influences.

Features That Prove Supremacy

Instant Alarm
Every telephone is a fire alarm station, permitting operator to sound alarm instantly, giving your fire department a chance to get the jump on the fire.

Universal Sound Projector
The Erick Sound Rotor and Deflector is built to instantly send a Fire Alarm.

Our Free Trial offer is made in all sincerity. We welcome your inquiry.

ERICK ELECTRIC SIREN CO.

STATE AND FILLMORE AVE., ST. PAUL, MINN.

ROTARY PUMPS
FIRE HYDRANTS

Waterous

Send for our Complete Catalog

Agents in Principal Cities

WATEROUS COMPANY

St. Paul, Minnesota

New Victor Gas and Fume Mask

Better Rubber. Longer Life. Better Fitted. Moulded to Fit the Face. Better Vision. Renewable Lenses. Better Air. Better Work. Low Prices. High Quality.

Over 5,000 Victor Gas Masks in Service

Full Line Fire Dept. Supplies and Equipment.

New 43 Edition Catalog on Request

The Woodhouse Mfg. Co., Inc

156 Chambers St., New York

D. A. Woodhouse, Pres. and Gen. Mgr. — George J. Kuss, Vice-Pres. and Treas

THE INTERNATIONAL LINE includes Speed Trucks for 1½, 1½, and 2 ton loads and Heavy-Duty Trucks for loads up to 5 tons. Municipal equipment available for every purpose. 136 direct Company-owned branches in the United States.

INTERNATIONAL HARVESTER COMPANY of America [Incorporated]

606 S. Michigan Ave. Chicago, Ill.

INTERNATIONAL TRUCKS

HARVESTER COMPANY

C. A. M.

The Greatest of All Fire Apparatus Sirens

Unconditionally Guaranteed

See our page ad in last issue

C. A. M. Manufacturing Co.

802 Humboldt Bank Bldg., San Francisco, Cal.

HAHN

Motor Fire Apparatus

Write for literature and prices on our 250, 350, 500 and 750-gallon triple combinations, chemical and hose combinations and city service trucks.

Hahn Motor Truck Co.,

Hamburg, Pa.

HALE PUMPS

LONGER effective life, higher efficiency and greater freedom from trouble may be had by using Hale Dreadnaught Fire Pumps.

HALE FIRE PUMP CO.

Conshohocken, Pa.

The "Corey" Fire Hydrant of the improved Rensselaer type is the easiest to operate of any on the market.

Ask for prices and details

FILL IN AND MAIL TO

RENSSELAER VALVE CO., Troy, N. Y.
Send me Hydrant Book, No. 9.

Name .....

Street ..... City .....

EDDY
Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience go into their manufacture and they embody valuable and exclusive features.

Write for the Facts

EDDY VALVE CO.

Waterford, N. Y.

James B. Clow & Sons, Chicago Agents

Stop! Don't Turn Over Until You Use the Coupon Below!

Fire Protection Equipment And Supplies

Fire Protection Equipment And Supplies

1 Acid Siphons
2 Adaptors for Changing Hydrant Threads.
3 Acid Jars and Rings.
4 Aerial Ladders, Detachable.
5 Aerial Trucks.
6 Alarms, Siren, Electric.
7 Alarm Systems, Industrial.
8 Alarm Systems, Municipal Telegraphic.
9 Alarms, Thermostatic.
10. Asbestos, Clothing.
11. Badges, Insignias, Buttons, etc.
12 Banners, Trumpets, etc.
13 Battery Jars.
14 Battery Zincs for Fire Alarm Batteries.
15 Bells, Fire Alarm, Municipal.
16 Body Equipments.
17 Boxes, Gongs, Reels, Registers, Fire Alarm.
18 Brakes, Air.
19 Brake Linings.
20 Brooms, Fire.
21 Building Materials, Fire Retardant.
22 Cable & Wire, Fire Alarm.
23 Caps, Firemen's.
24 Chains, Non-Skid, Fire Apparatus.
25 Chassis for Fire Apparatus.
26 Chemical Engines and Tanks.
27 City Service Trucks.
28 Coats & Suits, Firemen's Quick Hitch.
29 Combination Chemical & Hose Cars.
30 Cutting & Welding Equipment, Blow Torch.
31 Cutting & Welding Equipment, Electric.
32 Deluge Sets.
33 Door Openers, Fire Station, Automatic.
34 Extinguishers, Fire, Soda & Acid.
35 Extinguishers, Fire, Tetrachloride.
36 Extinguishers, Fire, Foam.
37 Extinguishers, Fire, Powder.
38 Fire Boat Nozzle Equipment.
39 Fire Department Supplies, General.
40 Fire Drills & Organizations.
41 Fire Exit Devices, Door Opening.
42 Fire Alarm Posts.
43 Fire Escapes, Portable.
44 Fire Escapes, Rigid.
45 First Aid Equipment.
46 Flare Lights.
47 Flashlights, Hand.
48 Foam Liquid for Extinguishers.
49 Gas Masks and Respirators.
50 Gas & Smoke Helmets.
51 Gasoline & Oil Handling Equipment.
52 Goggles, Firemen's.
53 Helmets, Metal, etc.
54 Hose Carts, Reels & Racks.

This page is here to make it *convenient* for you to get complete specifications and prices from *reliable* manufacturers of equipment needed for your department. It is *your* page to use freely without any obligation.

To get the information you want, just mail in the coupon below with your name and address and numbers that indicate the equipment listed below on which you would like descriptive literature.

We will then notify reliable manufacturers of your interest in such equipment and request that they send you complete information. They will gladly do this and it will be a pleasure for us to help you in this way. No charge whatever! Help yourself!

—TEAR OFF HERE—

FIRE ENGINEERING

225 West 34th St., New York City.

As a fire protection official I should like to have descriptive literature and complete information mailed to me, without cost or obligation, on the equipment indicated by the following numbers:

Nos.....

Nos.....

Nos.....

Nos.....

Date.....

Name.....

Position.....

Street..... .....

City and State.....

.....

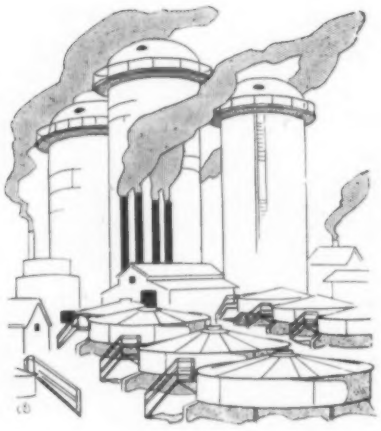
.....

.....

.....6-29-27

55 Hose Clamps.
56 Hose Fire.
57 Hose, Chemical.
58 Hose Holders.
59 Hose Jackets.
60 Hose Standardization Tools.
61 Hydrant Draining Pumps.
62 Hydrants, Fire.
63 Jacks for Fire Trucks.
64 Jacks, Shoring & Prying.
65 Ladders, Fire.
66 Lightning Arresters.
67 Motorcycles, Fire Dept. Equipped.
68 Nets, Life.
69 Nozzles, Pipes & Misc. Brass Goods.
70 Packings, Pump.
71 Pads, Pole Hole.
72 Paints, Fire Resisting.
73 Priming Ether, Motor.
74 Pumping Cars, Standard.
75 Pumping Cars, Foam.
76 Pumps, Fire Apparatus.
77 Pumps, Fire Service, Stationary.
78 Pumps, Portable, for Fire Protection.
79 Record Books, Fire.
80 Relief Valves.
81 Reviving Apparatus, Oxygen.
82 Rubber Clothing.
83 Searchlights.
84 Shingles, Fire Retardant.
85 Shirts, Firemen's Special.
86 Sirens, Apparatus & Chiefs' Cars.
87 Sliding Poles.
88 Soda & Acid Chemicals.
89 Spark Plugs, Fire Apparatus & Motorcycles.
90 Squad and other Auxiliary Cars.
91 Sprinkler Head Shut-Offs.
92 Sprinkler Supervisory Service.
93 Sprinkler Systems, Automatic, Foam.
94 Sprinkler Systems, Automatic Water
95 Starters, Fire Apparatus, Automatic, Air.
96 Steam Fire Engines.
97 Tarpaulins & Fire Blankets.
98 Tetrachloride Chemicals.
99 Thawing Equipment, Hydrant.
100 Tires, Fire Apparatus, Pneumatic, Solid, Cushion and Non-Skid.
101 Tractors.
102 Traffic Clearing Systems.
103 Triple Combination Pumping Cars.
104 Uniforms.
105 Water Towers.
106 Wheels, Cushion.
107 Whistles, Fire Alarm, Compressed Air.
108 Whistles, Fire Alarm, Steam.
109 Whistles, Fire Apparatus.
110 Wrecking Trucks.

For Information on Any Equipment Not Listed Above, Write on This Page or Use Separate Sheet.



Pumping 22½ Hours per Day—Every Day

IN MARCH, 1923, two 1050 GPM pumps were put in service in a large Pacific Coast Refinery. After eighteen months operation 22½ hours per day, against pressures ranging from 120 to 250 pounds per square inch, Engineers from another oil company tested these pumps and gave them an overall operating efficiency rating of over 94%. Read that again.

Since these first two pumps were put in operation in 1923, the owner has purchased thirty additional Northerns, while the second company has purchased ten. No guessing, no theorizing here. Outstanding Northern performance secured these orders.

From March, 1923, to March, 1926, the first 2 pumps have handled over three billion gallons of petroleum products. This vast quantity of petroleum would fill over 390,000 tank cars, capacity 8,000 gallon each.

Placed end to end this number of tank cars would stretch a solid train from New York to San Francisco, back to New York City and thence from New York to Minneapolis, with 330 miles of cars left over.

Translate this pumping ability and length of service into fire service and then—Specify a Northern on your next pumper.

You can buy a Northern Pump through any one of 13 Fire Apparatus Manufacturers in the United States. They use the best.

Northern Pumps are doing big things in the industrial world — performing exacting services — establishing records for dependability, durability and efficiency.

Many of the world's largest users of pumps buy Northerns regularly.

Northern Pump ads will tell you interesting, impressive provable facts of the things that are being done by Northern Pumps that no other Rotary fire pump has done.

This is one of a series of such ads.

NORTHERN ROTARY PUMPS

"MORE GALLONS PER HORSE POWER"

NORTHERN FIRE APPARATUS CO.

902—18th Ave. N. E.
MINNEAPOLIS, MINN.

ADVERTISING INDEX

Advertising Pays — in Fire Engineering

	PAGE
Ahrens-Fox Fire Engine Co.	629
American District Telegraph Co.	666
American-LaFrance Engine Co.	658
Bi-Lateral Fire Hose Co.	669
B. & M. Siren Mfg. Co.	666
Braxmar Co., C. G.	661
Buffalo Fire Appliance Corp.	665
C. A. M. Mfg. Co.	670
Carpenter Mfg. Co.	662
Clay, Inc., John H.	662
Clifton Mfg. Co.	669
Combination Ladder Co.	669
Darling Valve & Mfg. Co.	630
Decot Machine Works	666
Eastman Co., Samuel	669
Eddy Valve Co.	670
Erick Electric Siren Co.	669
Eureka Fire Hose Mfg. Co.	*Front Cover*
Everson-Ross Co.	666
Fabric Fire Hose Co.	*Back Cover*
Firestone Tire & Rubber Co.	*Inside Front Cover*
Foamite-Childs Corp.	631
Gamewell Co.	634
Gibbs-Wahlert Mask Co.	669
Hahn Motor Truck Co.	670
Hale Fire Pump Co.	670
Harrington-Seaberg Corp.	665
Henderson-Ames Co.	662
Henderson & Co.	662
Information for Buyers	**671**
International Harvester Co.	670
Lally Fire Appliance Co.	666
Larkin Mfg. Co.	669
Maxim Motor Co.	662
Mine Safety Appliance Co.	661
Morse & Sons, Inc., Andrew J.	666
Northern Fire Apparatus Co.	672
Nott Co., W. S.	669
Pirsch & Sons Co., Peter	662
Reeds Sons, Jacob	662
Rensselaer Valve Co.	670
Seagrave Corp.	627
Signal Shirt Company	665
Siracode Signal Corp.	632
Southworth Machine Co.	662
Sterling Siren Fire Alarm Co.	633
Union Water Meter Co.	661
Waterous Fire Engine Works	670
Waukesha Motor Co.	*Inside Back Cover*
Wood & Co., R. D.	661
Woodhouse Mfg. Co.	670

This Life Line—

is for Fire Protection Officials

who are not already regular subscribers to FIRE ENGINEERING (225 W. 34th Street, N. Y. C.) We guarantee to sweep you off your feet with the wealth of worth-while, interesting, practical information we'll give you every issue—26 for $3 payable 30 days after you receive your bill—if you are satisfied!

We shall be mighty glad to hear from you along these lines!

Name .....

Position .....

Address .....

Properly Used ← This Line Will Sweep You Off Your Feet!

You Should Have Them!

These two new books contain a mighty fine lot of up-to-the-minute information for every fire officer. Just glance through the list of topics covered as shown below — Then get your order in while the editions last.

Questions and Answers for Battalion and Deputy Chief
(210 pages, fully illustrated)

By Geo. J. Kuss,
Former Deputy Chief N. Y. F. D., and

Fred. Shepperd, B. Sc., M. E.,
Managing Editor, FIRE ENGINEERING

Price $2.00; Postpaid $2.15.

CONTENTS:

Detailed description of the proper procedure in fighting fires: 1. Size-up; 2. Calling of help; 3. Saving of life; 4. Covering exposures; 5. Extinguishing fire; 6. Overhauling.

Fires of large size: How the following types of fires should be fought:
- Joisted brick buildings;
- Large department stores;
- Large hotels and rooming houses;
- Warehouses on waterfronts;
- Large area residential fires;
- Trains of gasoline tank cars;
- Combination stores and apartments;
- Large oil works;
- Motion picture film exchanges;
- Large refrigeration plants;
- Fiber and rag warehouses;
- Tall office buildings;
- Piano factories;
- Armory (during merchandise exhibitions);
- Large area celluloid merchandise factory;
- Seashore resort conflagrations;
- Large area "taxpayers;"
- Wholesale grocery stores and warehouses;
- Group-building fires;
- Theatres, schools, shoe and candy factories.

Inspection work: what it should cover, and how to supervise it.

Fire Hazards: a list of the more prominent hazards and how they may be corrected.

Overhauling: what it includes and how it is supervised.

Reports of Chief Officers: how to prepare.

How to test motor fire apparatus.

Back draughts: what they are and how to prevent them.

Etc., etc., etc.

Questions and Answers for Lieutenant and Captain
(290 pages, fully illustrated)

By Geo. J. Kuss,
Former Deputy Chief N. Y. F. D., and

Fred. Shepperd, B. Sc., M. E.,
Managing Editor, FIRE ENGINEERING

Price $2.50; Postpaid $2.65.

CONTENTS:

Fires: How the following types of fire should be fought: Celluloid; ammonia refrigerating plants; public schools; old style tenements; private houses; lumber yards; loft buildings; stables; oil refineries; varnish works; new tenements; quicklime plants; cotton warehouses; cold storage plants; clothing factories; churches; rubber cement works; printing plants; steamships; theatres; motion picture studios; restaurants; frame tenements; wood working factories; department stores; garages; hay sheds; 5 and 10-cent stores; grocery stores; lodging houses; acid and chemical storehouses; pitch and turpentine warehouses; vegetable oil storehouses; fire-resistant office buildings; carpet mills; wooden piers; graneries; rag warehouses, etc.

Protecting private property at fires.

Ventilation, what it does; how it should be performed.

What to do in a theatre fire emergency.

How to maintain discipline.

Inspections, how to make them.

Duties of fire officers.

Evolutions and drills.

Use of apparatus.

Use of appliances.

First aid at fires.

Dangerous chemicals.

How to handle chemical fires.

Rules and regulations.

How to write reports, and fire department communications.

"False and True" questions and answers.

How to answer examinations.

Etc., etc., etc.

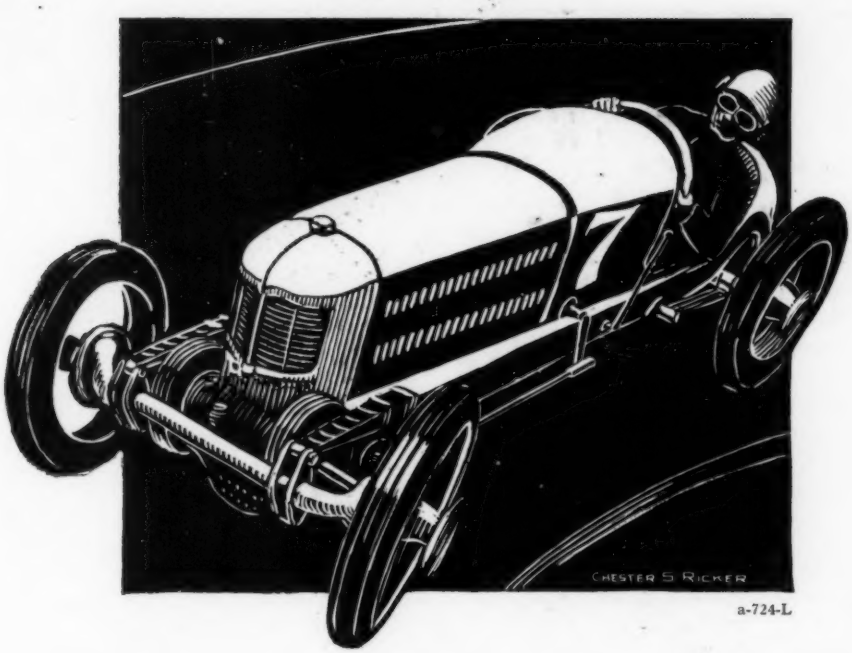
Use This Coupon to Order Your Copies

Book Department,
FIRE ENGINEERING
225 W. 34th St., N. Y. C.

Please send me ..... copies of Questions and Answers for Battalion and Deputy Chiefs, ... copies of Questions and Answers for Lieutenants and Captains, for which I enclose a money order for $.....

Name.....Address.....

Rank..... Date.....



a-724-L

Leading the Field

Just as super-charged, front wheel drive racing cars are the most up-to-date development in Racing, so the "Ricardo" type combustion chamber is one of the most advanced engineering achievements in the automotive industry. The "Ricardo" Head gives predetermined control of combustion so that maximum power can be obtained from the minimum amount of fuel without that engine wrecking "ping" or detonation common to conventional "Ell" head engines. Briefly it gets "valve-in-the-head" power out of the simple "Ell" head type of engine without "ping."

All Waukesha Engines are equipped with the well known "Ricardo" Head, a patented design owned by the Waukesha Motor Company. Our 100 horsepower six cylinder heavy duty type of engine is particularly suited to 750 Gallon Pumper Service. It is now used in every new piece of fire apparatus built by the City of Milwaukee. This choice merely confirms nearly two years past experience with them, also they have passed every Underwriter's Test with ease. If you do not know about them, you had better write for the Fire Engine Bulletin and for the complete reports of Underwriter's Tests that these Heavy Duty Six Cylinder Engines have passed.

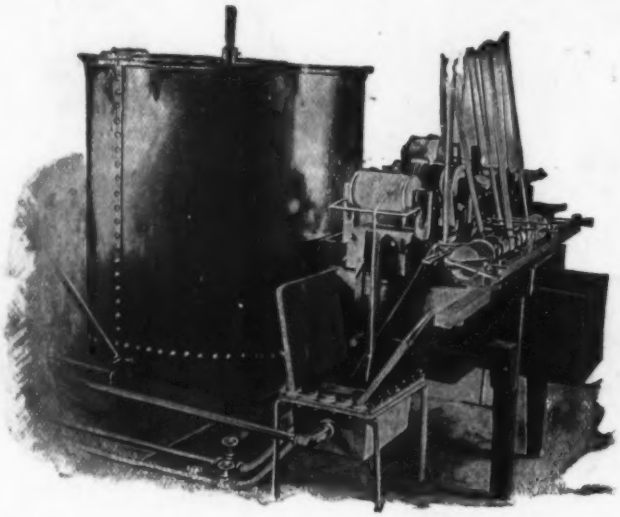
D-744-L

FIRE EQUIPMENT DIVISION

WAUKESHA MOTOR COMPANY

Waukesha 956 St. Paul Ave. **Wisconsin**

Eastern Sales Office *Eight W. 40th Street* *New York City*

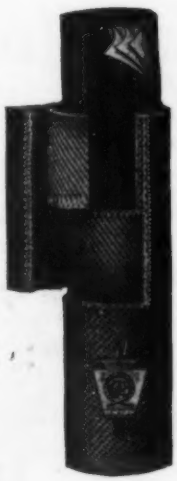


How is it Made?

FABRIC FIRE HOSE is so unusual in its construction that we have been asked again and again just how it is made. Those who have used it and have found its wonderful service qualities, far above the average hose, felt sure that we must have some special process of manufacture that makes Fabric Hose better.

And we have.

For instance, the machine illustrated above is for our patented process of treating the cotton strands with wax and Para gum, making Fabric Hose absolutely waterproof and impervious to mildew and rot.



Many other details of our process, besides this one, are illustrated and explained in a little booklet we shall be glad to mail you for the asking.—"Wax and Para Gum Treated Fire Hose.—How It Is Made." Address:

Fabric Fire Hose Co.

9-15 Park Place, New York, N. Y.

124-126 W. Lake Street, Chicago

Atlanta	Dallas	Minneapolis	Los Angeles
Boston	Binghamton	Portland	Newark
Columbus	Baltimore	San Francisco	Pittsburgh

PRINTED BY THE WILLIAMS PRESS, ALBANY, N. Y.